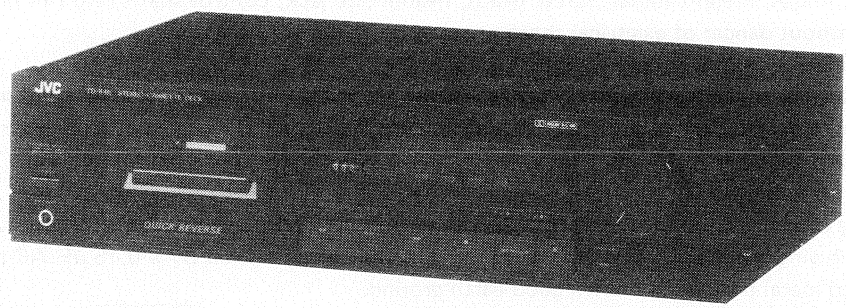
JVC

SERVICE MANUAL

STEREO CASSETTE DECK

TD-R411 A/B/C/E/G/J/U



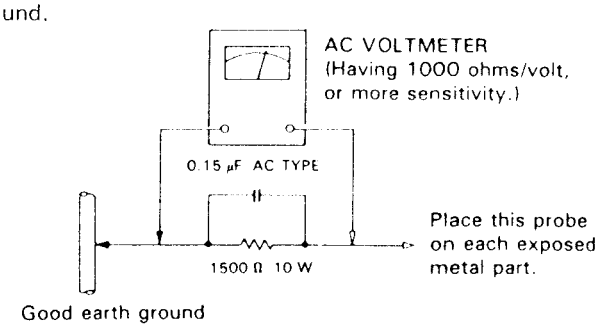
Area suffix	
A	Australia
B	U.K.
C	Canada
E	Continental Europe
G	W. Germany
J	U.S.A.
U	Other Areas

Contents

No. 4290
March 1988

1 Safety Precautions

1. The design of this product contains special hardware and may circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by (⚠) on the Schematic Diagram and Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

2 Features

1. **Silent quick-reverse mechanism**
2. **Dolby* B/C noise reduction system**
3. **2-color 6-LED peak level indicator**
4. **Mechanism mode indicators**
5. **Auto tape selection mechanism**
6. **COMPU LINK-1/SYNCHRO terminal**

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
* "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

3 Specifications

Type	: Stereo cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 1-7/8 inch/sec (4.8 cm/sec)
Frequency response	: (–20 dB recording)
	Metal tape; 20–17,000 Hz
	30–16,000 Hz (±3 dB)
	Chrome tape; 20–16,000 Hz
	30–15,000 Hz (±3 dB)
	Normal tape; 20–16,000 Hz
	30–15,000 Hz (±3 dB)
S/N ratio	: 58 dB (S = 1 kHz, K3 = 3%, N = A-weighted, Metal tape)
	The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz –10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with Dolby B NR on.
	Improvement of MOL: 4 dB at 10 kHz with Dolby C NR on.
Wow and flutter	: 0.08% (WRMS)
Channel separation	: 40 dB (1 kHz)
Crosstalk	: 60 dB (1 kHz)
Harmonic distortion	: K3; 0.5%, THD; 1.0% (metal tape, 1 kHz, 0 VU)
Heads	: METAPERM head for recording/playback
	2-gap ferrite head for erasure
	Combination head x 1
Motors	: Electronic governed DC motor for capstan x 1
	DC motor for reel x 1
	DC motor for mechanism drive x 1
Fast forward/ Rewind time	: Approx. 100 sec with C-60 cassette
Input terminals	
LINE IN (x 1 circuit)	: Min. input level; 80 mV Input impedance; 50 kΩ
MIC x 2 (TD-R411A/U)	: Max. sensitivity; 0.4 mV (–68 dBV) Matching impedance; 600 Ω – 10 kΩ
Output terminals	
LINE OUT (x 1 circuit)	: Output level; 300 mV Output impedance; 600 Ω
PHONES x 1	: Output level; 0.3 mW/8 Ω Matching impedance; 8 Ω – 1 kΩ
Other terminals	: COMPU LINK-1/SYNCHRO x 2
Power requirement	
TD-R411A/B	: AC 240 V, 50/60 Hz
TD-R411C/J	: AC 120 V, 60 Hz
TD-R411E	: AC 220 V, 50/60 Hz
TD-R411U	: AC 230/127/110 V, 50/60 Hz
Power consumption	: With power switch on; 14 W With power switch standby; 1.2 W
Dimensions (W x H x D)	: 435 x 112 x 290 mm (17-3/16" x 4-7/16" x 11-7/16")
Weight	: 3.9 kg (8.6 lbs)
Accessories	: Pin plug cord . . . . . 2 Remote cable 1

Design and specifications are subject to change without notice.

4 Name of Controls and Their Functions

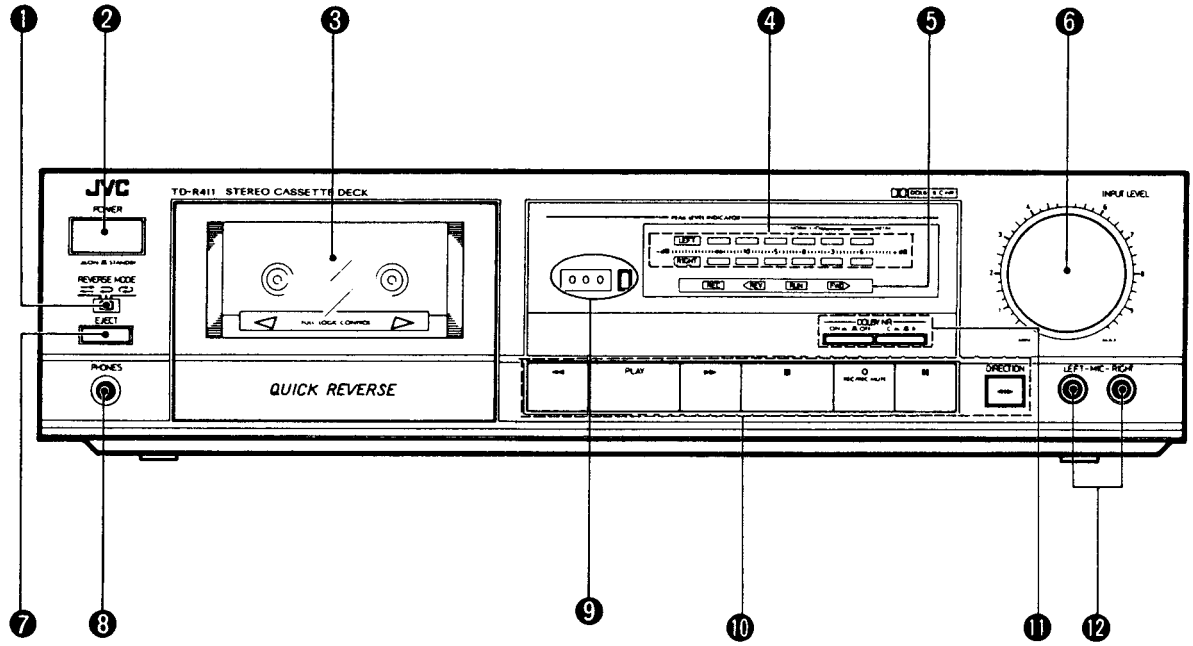


Fig. 4-1

❶ **REVERSE MODE switch**
Select the single or full record/playback mode, or the continuous play mode. (See page 25.)
- : For single-side recording or playback.
- : To play or record both sides A and B.
- : To play sides A and B continuously.

❷ **POWER switch**

❸ **Cassette holder**

❹ **PEAK LEVEL indicators**
These indicate the recording level during recording and output level during playback. The LED indication varies with the signal strength during recording and playback.

❺ **Mechanism mode indicators**
REC : Lights in the recording and record-pause modes; flashes during record muting.
REV : Lights when the tape is running in the reverse direction.
RUN : Flashes when the tape is running.
FWD : Lights when the tape is running in the forward direction.

❻ **INPUT LEVEL control**
Adjust the recording level with this control.

❼ **EJECT button**
Press to open the cassette holder.

❽ **PHONES jack**
Connect headphones (with an impedance of 8 Ω to 1 kΩ).

❾ **Tape COUNTER and RESET button**

❿ **Cassette operation buttons**
◀◀ : Press to wind the tape quickly from right to left.
PLAY: Press to start recording/playback.
▶▶ : Press to wind the tape quickly from left to right.
■ **(stop)** : Press to stop the tape.
○ **REC/REC MUTE** : Press the PLAY button while pressing this button to start recording, and press to leave an appropriate non-recorded section. (See page 23.)
II (pause) : Press to stop the tape temporarily. Press the PLAY button to release the pause mode. When pressed together with the ○ REC/REC MUTE before recording, the unit will enter the record-pause mode.
◀I▶ **DIRECTION** : Press to change the direction of tape travel.

⓫ **DOLBY NR switches**
The left switch switches on and off noise reduction and the right switch selects which noise reduction system (Dolby B NR or Dolby C NR) is to be used.

⓬ **Mic jacks (L, R) (TD-R411A/B/E/G/U)**
Connect microphones (with an impedance of 600 Ω to 10 kΩ) to these jacks.
With microphones connected to these jacks, the input to LINE IN (REC) or DIN (for G version) terminals is cut off automatically.

5 Location of Main Parts

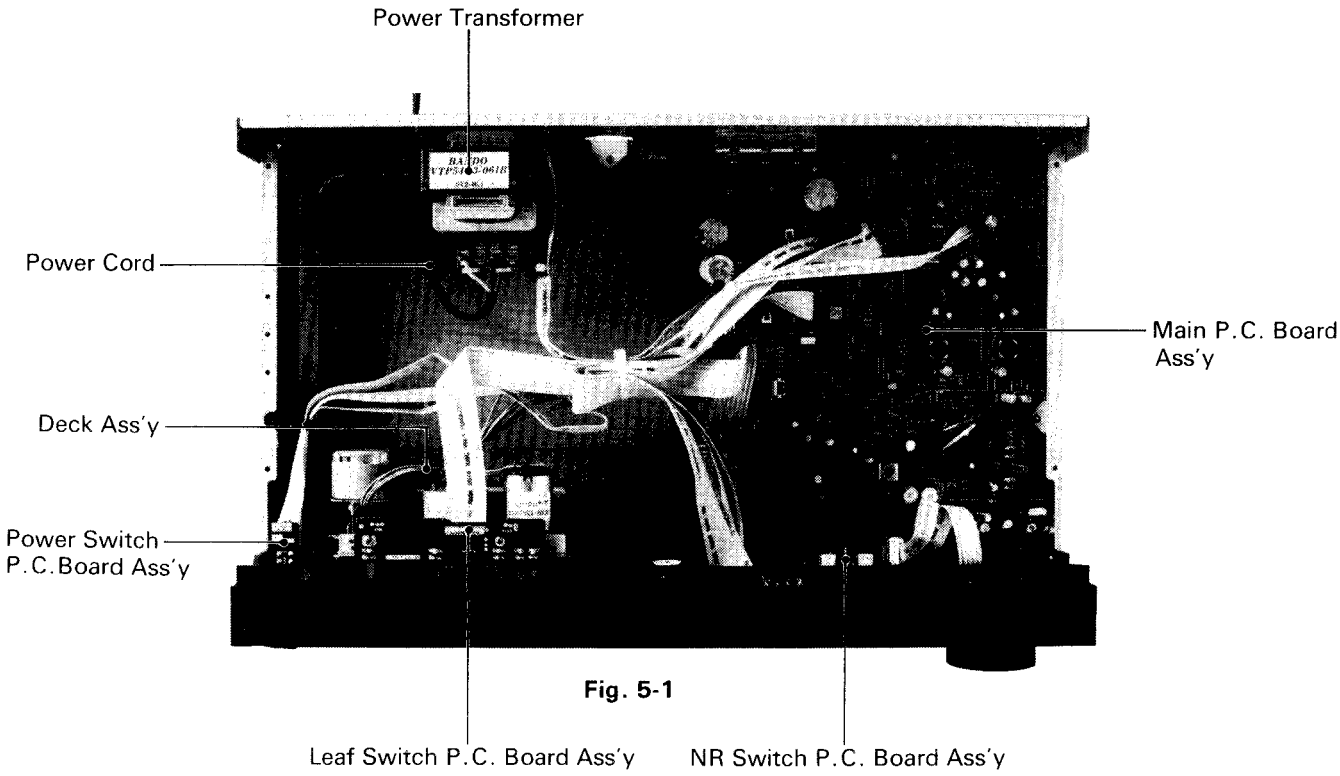


Fig. 5-1

6 Removal of Main Parts

■ Enclosure Section

■ **Top cover**

1. Remove four screws retaining the both sides of the top cover.
2. Remove two screws retaining the back sides of the top cover.

■ **Bottom cover**

Remove six screws ① ①' retaining the top and bottom side of the bottom cover. (Fig. 6-1)

■ **Front plate**

Remove five screws ② retaining the top and bottom side of the front plate. (Fig. 6-2)

■ **Front panel**

1. Remove four screws ③ retaining the both sides of the front panel. (Fig. 6-2)
2. Disconnect connectors CP501, CP502, CP503, CP505 and CP901 of Main board ass'y.
3. If necessary, remove dressed wires temporarity.
4. Pull out the Main board ass'y.

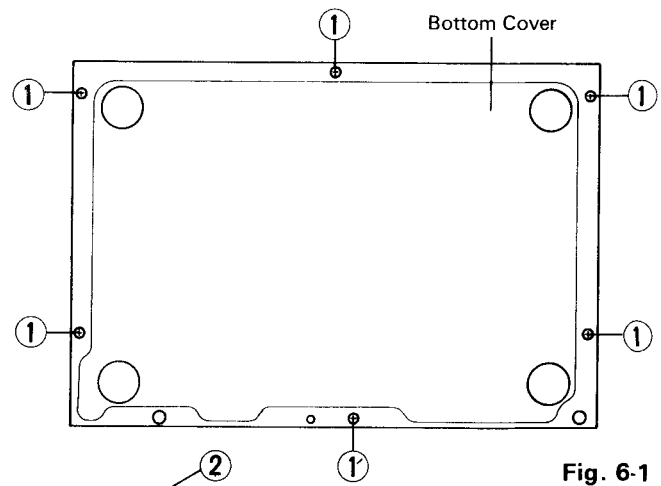


Fig. 6-1

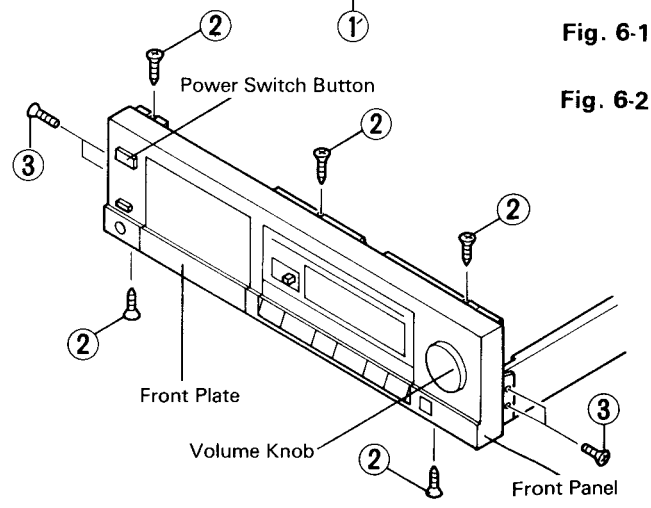


Fig. 6-2

■ Deck Section

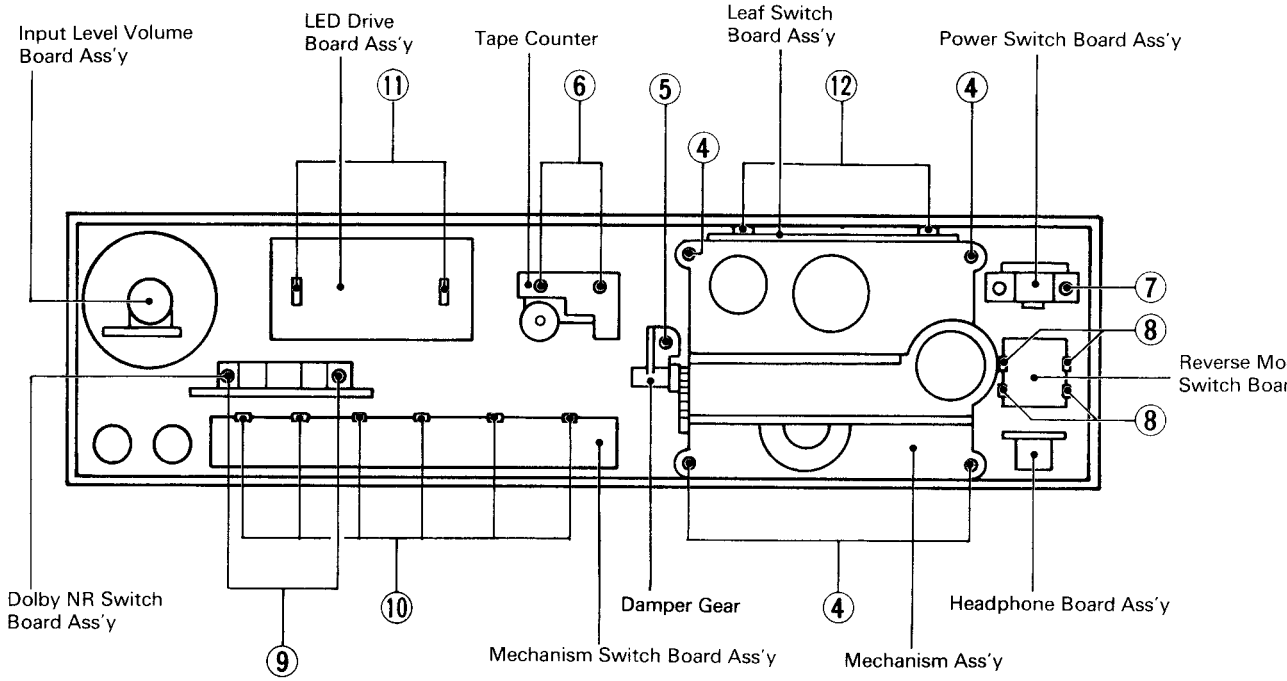


Fig. 6-3

■ **Mechanism ass'y**
1. Remove the counter belt.
2. Remove four screws ④ retaining the mechanism ass'y. (Fig. 6-3)
3. Press the EJECT button to open the cassette door.
4. Remove two screws ⑫ retaining the leaf switch board ass'y to mechanism ass'y. (Fig. 6-3)

■ **Cassette door**
1. Remove one screw ⑤ from damper gear. (Fig. 6-3)
2. Remove the cassette cover from the front panel disengaging its fulcrums on both sides and pull it out forward.

■ **Tape counter**
1. Remove two screws ⑥ retaining the tape counter. (Fig. 6-3)

■ **Input level volume board ass'y**
1. Pull out the volume knob. (Fig. 6-3)
2. Remove the nut for volume.

■ **Power switch board ass'y**
1. Pull out the power switch button.
2. Remove one screw ⑦ from power switch.

■ **Headphone board ass'y**
Pull out the headphone board ass'y and lift it upward.

■ **Reverse mode switch board ass'y**
Remove four pawls ⑧ retaining reverse mode switch board ass'y. (Fig. 6-3)

■ **Dolby NR switch board ass'y**
1. Remove two screws ⑨ from the Dolby NR swich. (Fig. 6-3)
2. Remove two buttons.

■ **Mechanism switch board ass'y**
Remove six pawls ⑩ retaining the mechanism switch board ass'y. (Fig. 6-3)

■ **LED drive board ass'y**
Remove two pawls ⑪ retaining the LED drive board ass'y.

■ Mechanism (Deck) Section

■ Head ass'y (Fig. 6-4)

1. Remove the head wires from the wire holder.
2. To protect the head gap, apply soft paper and stick it provisionally.
3. Remove two screws ① both sides of head gap and pull out the head ass'y carefully.

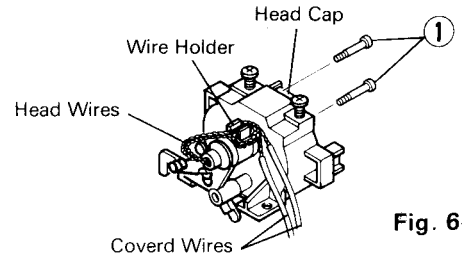


Fig. 6-4

■ Head mount ass'y (Fig. 6-5)

Remove two screws ② retaining the head mount ass'y.

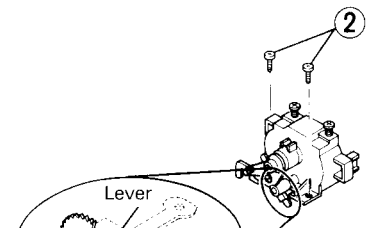


Fig. 6-5

Fig. 6-6

■ Pinch roller ass'y

Push a pawl catching the pinch roller ass'y on the chassis in the direction of the arrow mark (Fig. 6-7) to remove it.

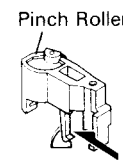


Fig. 6-7

Fig. 6-8

■ Flywheel bracket (FM bracket)

1. Remove two screws ③ securing the eject bracket ass'y. (Fig. 6-8)
2. Remove two screws ④ securing the flywheel bracket from the both sides. (Fig. 6-8)

- When the FM bracket is removed, the main belt is disengaged at the same time.
- The capstan motor and flywheel ass'y can be replaced by this procedure. (Fig. 6-9)

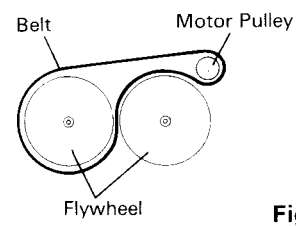


Fig. 6-9

■ Disk base unit

Remove three screws ⑤, ⑥ and ⑦ retaining the disk base unit. (Fig. 6-10, Fig. 6-11)

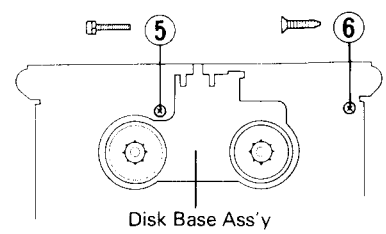


Fig. 6-10

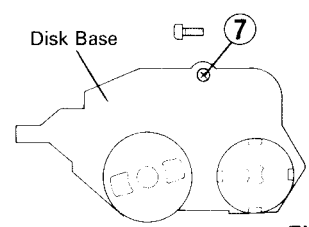


Fig. 6-11

- **Re-assembling of disk base unit**

1. Re-assemble the disk base unit in order of numbers (Ⓐ to Ⓔ) shown in Fig. 6-12.
   a) When setting the cam gear, make sure of its positioning so that the gear's wide side makes a right angle with the disk, while its small side is in parallel with the disk as shown in Fig. 6-13.

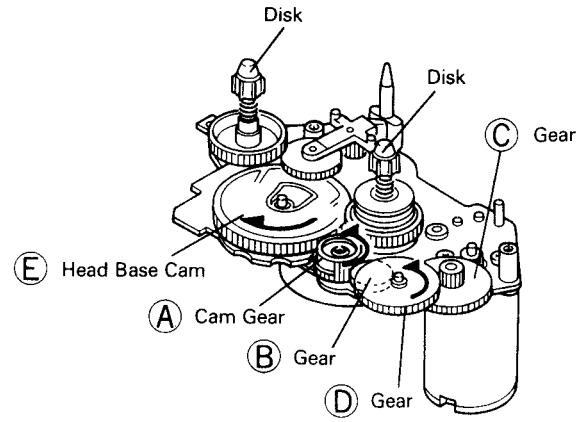


Fig. 6-12

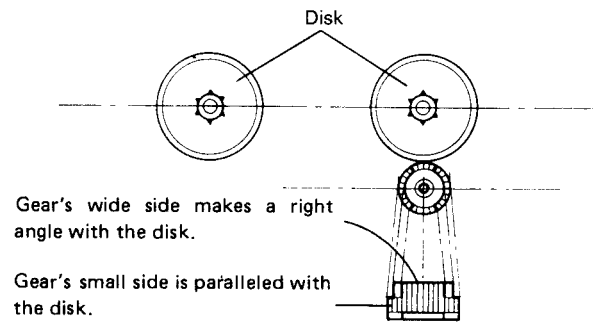


Fig. 6-13

   b) Engage the gears Ⓑ , Ⓒ and Ⓓ with each other. (Fig. 6-12)
   c) When putting back the head base cam Ⓔ , pay careful attention to positioning it so that big and small concaves are paralleled with the disk. (Fig. 6-14)
2. Turn the gears Ⓑ , Ⓓ in the direction of the arrow mark, and stop turing when the cam gear Ⓐ and the head base cam Ⓔ are free from each other (slit of the head base cam can be seen on the opposite side).

- **Fixing disk base unit to chassis**

Join together the head base cam and the pinch roller cam so as to catch on each other by the slits. (Fig. 6-15)

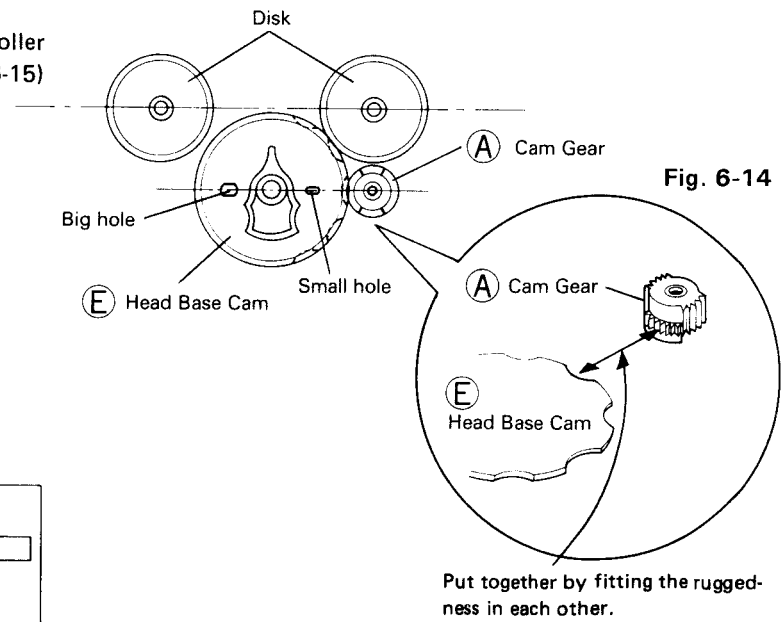


Fig. 6-14

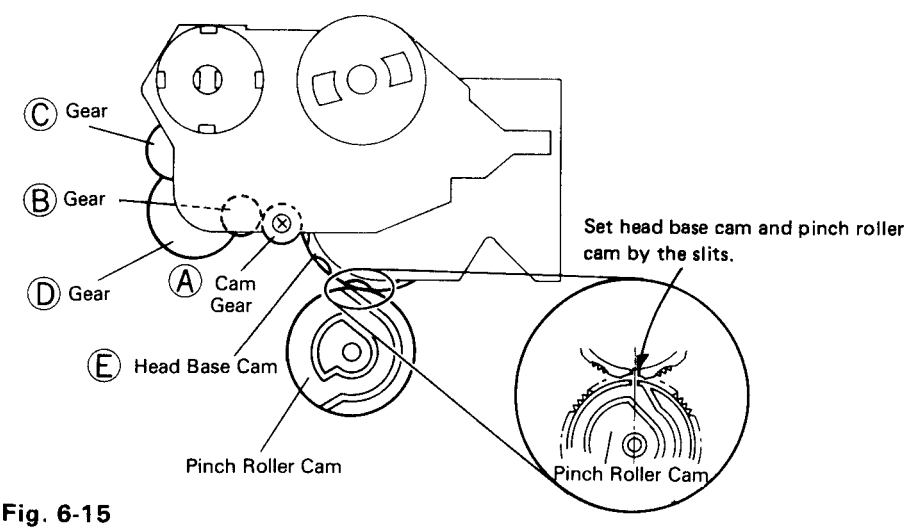


Fig. 6-15

7 Block Diagrams

[LET CHANNEL ONLY]

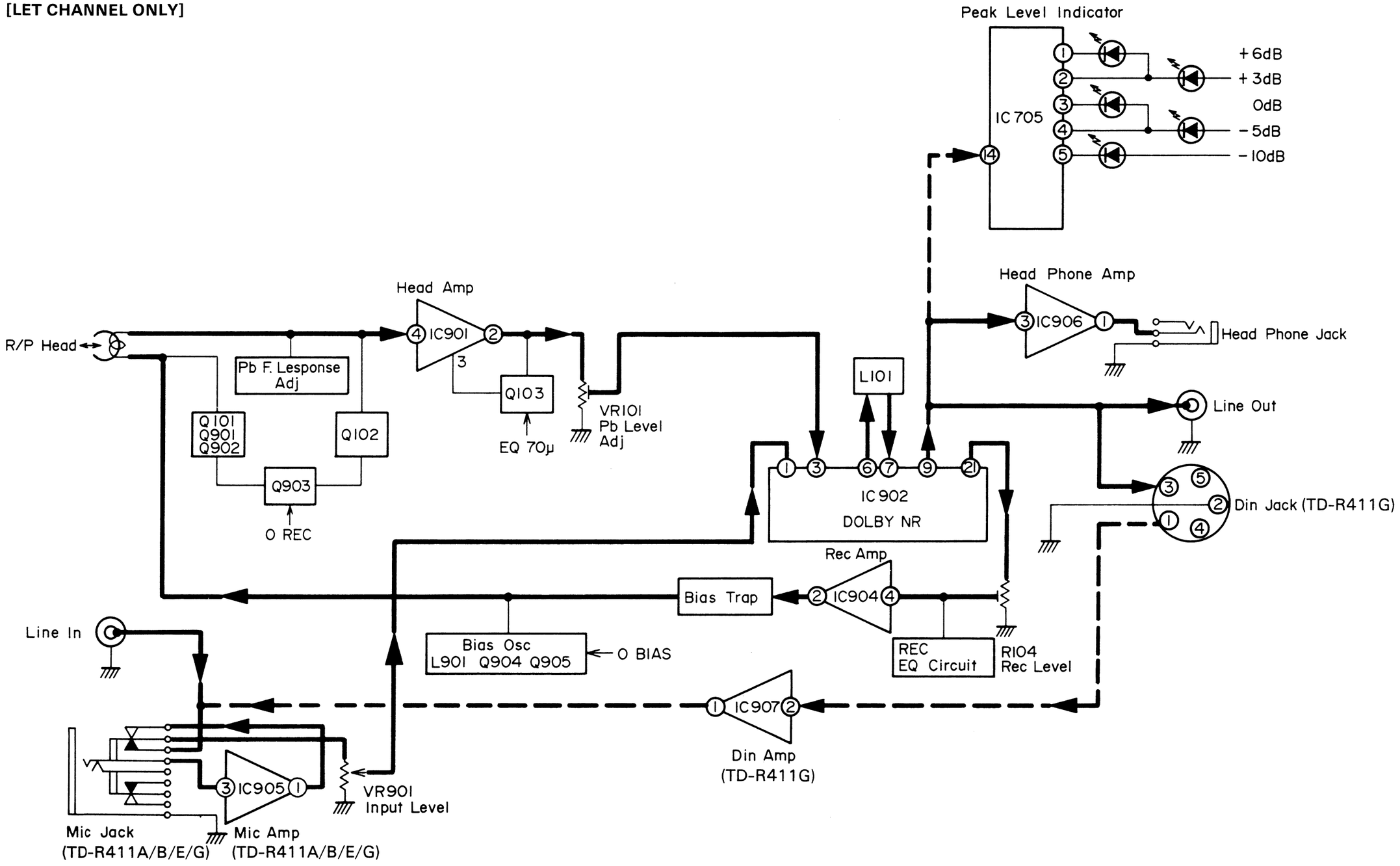


Fig. 7-1

8 Main Adjustments

1. Equipment and measuring instruments used for adjustments

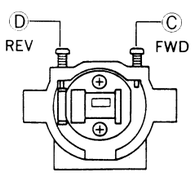
1) Electronic voltmeter
2) Audio frequency oscillator
   (range: 50 – 20 kHz and output 0 dB with impedance of 600 Ω)
3) Attenuator (impedance: 600 Ω)
4) Standard tape for REC/PB
   Maxell UD1 (TS-9) – Normal (SF) tape
   TDK SA – Chroma (SA) tape – or equivalent
   JVC ME – Metal tape
5) Reference tape for playback (JVC Test Tape)
   VTT712 (for tape speed, wow flutter adj.)
   VTT724 (for playback level)
   VTT739 (for playback frequency response)
   VTT703L (10 kHz) (for head azimuth adj.)
6) Resistor 600 Ω (for attenuator matching)
7) Distortion meter (bandpass filter)
8) Wow flutter meter
9) Frequency counter

■ **Power sources**
Set the line voltage selector switch to 240 V/230 V/220 V/127 V/120 V/110 V according to your local voltage.

AC 240 V, 50/60 Hz (TD-R411A/B)
AC 220 V, 50/60 Hz (TD-R411E/G)
AC 120 V, 60 Hz (TD-R411C/J)
AC 230 V/127 V/110 V, 50/60 Hz (TD-R411U)

2. Mechanism adjustment procedure

● Notice: 0 dBs = 0.775 (V)

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting motor speed	1. Connect a frequency counter to the LINE OUT terminals. 2. Play back the VTT712 test tape. 3. Adjust volume in motor for normal speed at 3000 Hz.	Volume in Motor	Normal speed: 3000 ± 15 Hz	
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.13% (WRMS).		0.13% (WRMS)	If the reading becomes moving value even if confirming to the standard, a reclaim may be raised. Repairs are necessary.
Adjusting Head azimuth	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Playback the VTT703L test tape. 3. Adjust the head angle with the screw (FWD Ⓒ and REV Ⓓ) until the reading of the electronic voltmeter becomes maximum for both channels.	Screws FWD Ⓒ REV Ⓓ	Maximum	

3. Electrical adjustments location

● **Main Amp. P.C. Board (parts assembly side view)**

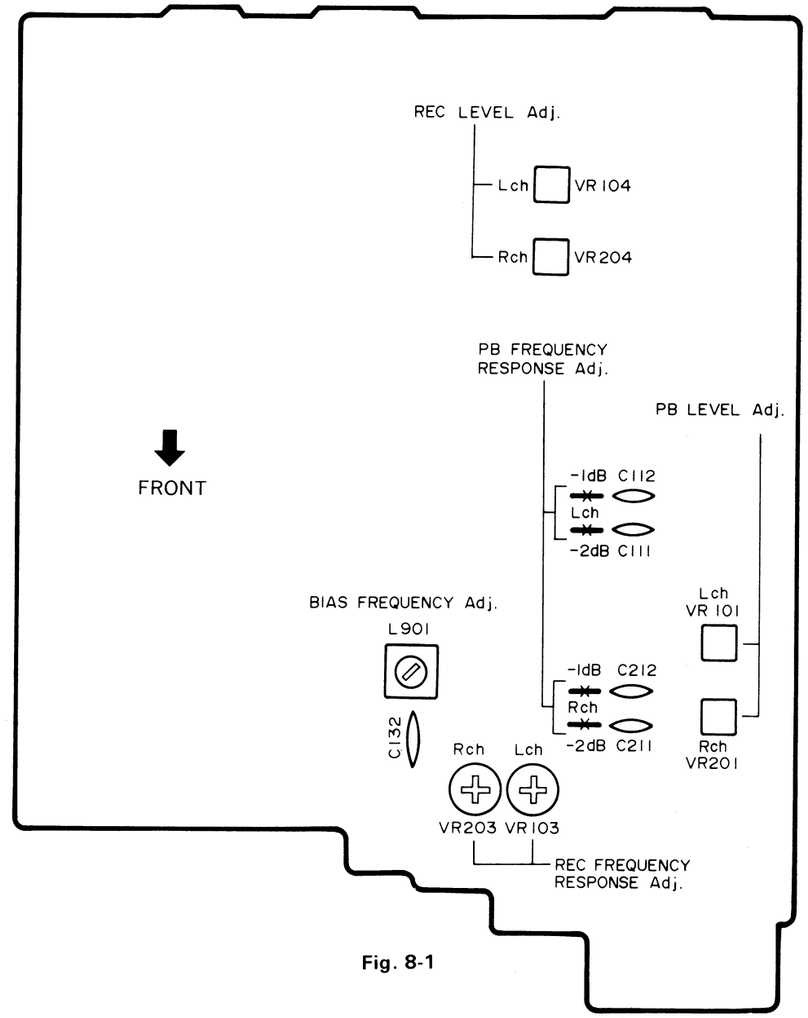
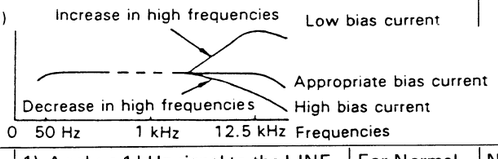


Fig. 8-1

4. Electrical circuit adjustment procedure

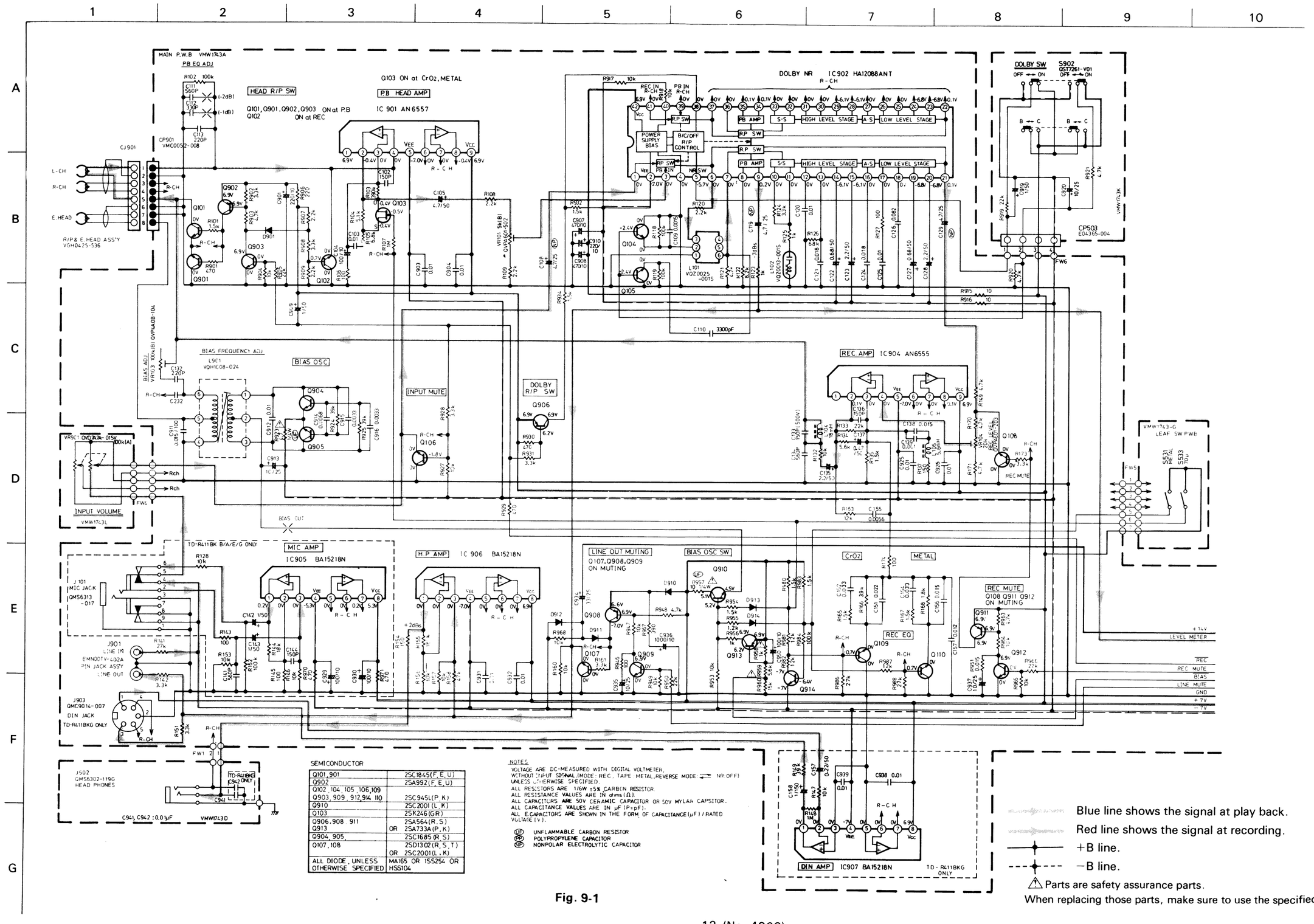
Perform the tape transport checks and head azimuth adjustment before following checks and adjustments.
Adjustment should be performed in the order of alignment steps.
In the steps marked with an asterisk (*), adjustment should be performed after replacing the heads.
Perform this adjustment with the NR switch set to OFF.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
*1	Confirming playback gain	Play back VTT724, then confirm that the level at LINE OUT is −8 dBs ± 0.5 dB. Adjust VR101 (L) and VR201 (R) so that LINE OUT level becomes −8 dBs.	L : VR101 R : VR201	−8 dBs ± 0.5 dB	When the head is replaced, adjust playback gain level. Cheeking : −24 ± 2 dBs at headphone output level. − 8 ± 1 dBs at DIN output level. (TD-R411G)
*2	Playback frequency response	Play back VTT739, then confirm that the level of 1 kHz and 10 kHz signals is 0 ± 1 dB. **Note**: Before adjustment, disconnect [−1 dB] [−2 dB] (L-ch) and [−1 dB] [−2 dB] (R-ch) so that the outputs of 1 kHz and 10 kHz signals are flat.	L : [−1 dB] [−2 dB] R : [−1 dB] [−2 dB]	0 ± 1 dB	L : [−1 dB] cut by −1 dB (C112) [−2 dB] cut by −2 dB (C111) R : [−1 dB] cut by −1 dB (C212) [−2 dB] cut by −2 dB (C211)
*3	Adjusting bias frequency	Connect the frequency counter to the C132 on body, then adjust L901 so that the counter reads 95 kHz.	L901	95 kHz ± 2 kHz	METAL Position
*4	Recording frequency response	1) NR switch: OFF 2) Record a 1 kHz signal at an input reference level of −20 dB, then record 12.5 kHz signals and play them back. At this time, adjust VR103 and VR203 so that the deviation of 12.5 kHz outputs satisfy the standard values with respect to 1 kHz output.	For Normal tape L : VR103 R : VR203	With respect to 1 kHz reference: At 12.5 kHz : 0 ± 0.5 kHz	
*5	Recording gain	1) Apply a 1 kHz signal to the LINE IN terminals, record a 1 kHz signal at −20dBs input for both (L and R) channels on a normal tape. 2) Play back the recorded part, and adjust the recording level controls so that LINE OUT terminal level becomes −8 dBs. Then adjust VR104 and VR204 so that LINE OUT terminal level becomes −8 dBs.	For Normal tape: L : VR104 R : VR204	Normal: −8 ± 0.5 dBs CrO_2 : −8 ± 1.5 dBs Metal: −8 ± 2 dBs	Perform the adjustment using a normal tape. Level difference between recording and playback for SA/CrO_2 and metal tapes should be less than 2 dB, and that between left and right channels should also be less than 3 dB.



Step	Item	Adjustment	Adjusting point	Standard value	Remarks
*6	Checking record/ playback distortion	1) Record a 1 kHz, −8 dB signal to LINE IN terminals. 2) Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		Normal tape: Less than 2% CrO_2 tape: Less than 3% Metal tape: Less than 2% (THD)	Be sure to perform this checking following bias current and recording level checking.
7	Checking signal to noise ratio in recording/ playback	1) Record a 1 kHz, 0 dB signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2) Play back the recorded part. Measure the 0 dB recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		Normal, CrO_2 & Metal tapes: More than 42 dB	Apply an input level to LINE IN terminals with the recording level controls set to maximum so that the peak level indicator reads 0 dB.
8	Checking erasing coefficient	1) Apply a 1 kHz, 0 dB signal to the LINE IN terminals. 2) Perform recording with the signal enhanced by 20 dB. 3) Erase a part of the recording. 4) Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 60dB	For the measurement using a metal tape, connect a band pass filter between the deck and the electronic voltmeter. Input (1 kHz, +20 dB) → Tape deck (recording, erasing) (1 kHz) Band pass filter → Electronic voltmeter
9	Checking minimum input level	1) Apply a 1 kHz signal to the LINE IN terminals, check the LINE OUT terminals level at −8 dBs with attenuator to see if the value confirms to the standard value.		LINE IN : −20 ± 3 dBs MIC IN : −66 ± 3 dBs (TD-R411A/B/E/G/U) DIN IN : −24 ± 3 dBs (TD-R411G)	Level difference between left and right channels should also be less than 3 dB.

9 Standard Schematic Diagrams



SEMICONDUCTOR

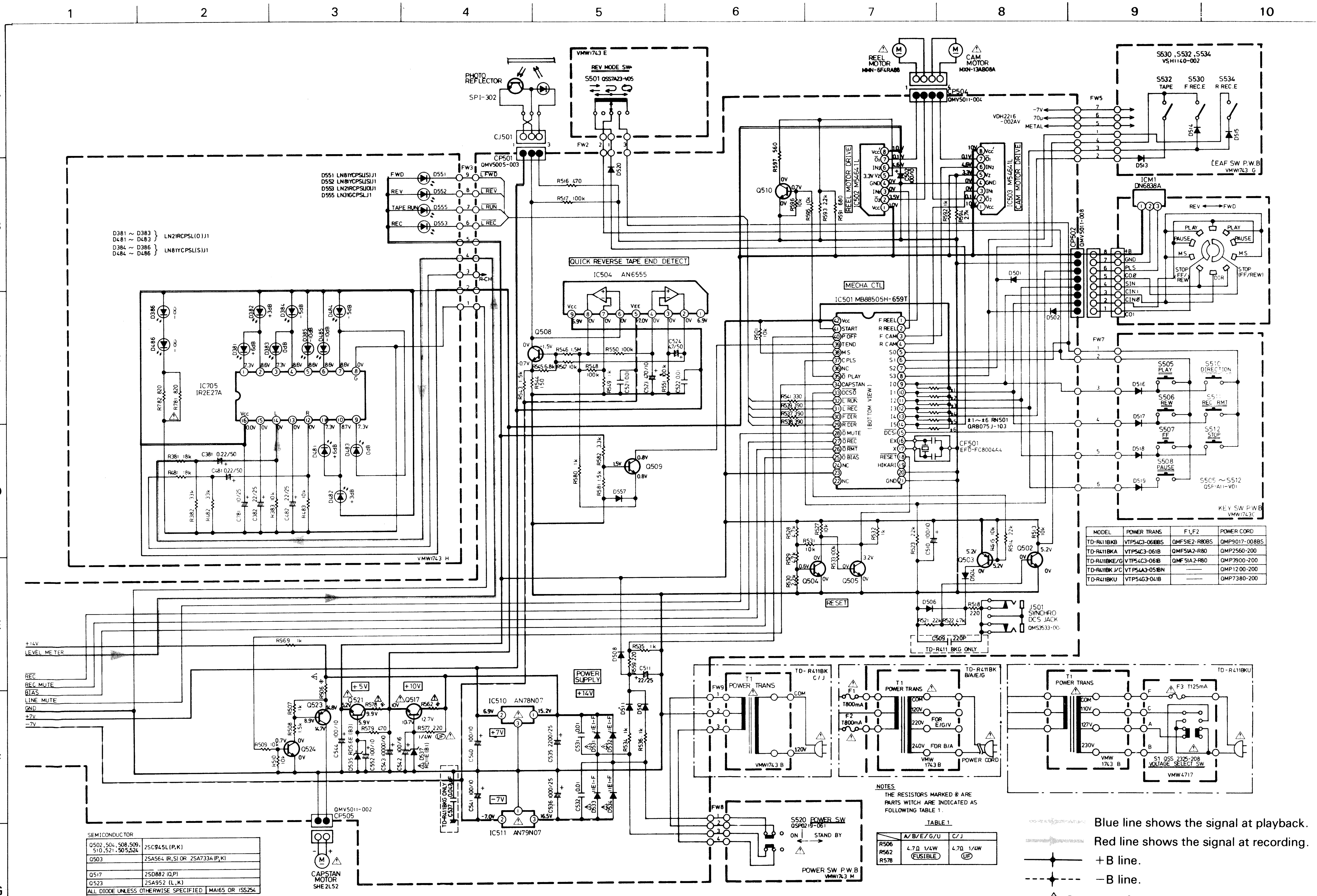
Q101, 901	2SC1845(F, E, U)
Q902	2SA992(F, E, U)
Q102, 104, 105, 106, 109 Q903, 909, 912, 914, 110	2SC945L(P, K)
Q910	2SC2001(L, K)
Q103	2SK246(GR)
Q906, 908, 911 Q913	2SA564(R, S) OR 2SA733A(P, K)
Q904, 905,	2SC1685(R, S)
Q107, 108	2SD1302(R, S, T) OR 2SC2001(L, K)
ALL DIODE, UNLESS OTHERWISE SPECIFIED	MA165 OR 1SS254 OR HSS104

NOTES:
VOLTAGE ARE DC-MEASURED WITH DIGITAL VOLTMETER.
WITHOUT INPUT SIGNAL (MODE: REC, TAPE: METAL, REVERSE MODE: NR OFF) UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
ALL RESISTANCE VALUES ARE IN ohms (Ω).
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPSITOR.
ALL CAPACITANCE VALUES ARE IN μF (P=pF).
ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF) / RATED VOLTAGE (V).

UF UNFLAMMABLE CARBON RESISTOR
MP POLYPROPYLENE CAPACITOR
NP NONPOLAR ELECTROLYTIC CAPACITOR

Blue line shows the signal at play back.
Red line shows the signal at recording.
+B line.
−B line.
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 9-1



MODEL	POWER TRANS	F1,F2	POWER CORD
TD-R411BKB	VTP54C3-061BBS	QMF51E2-R80BS	QMP9017-008BS
TD-R411BKA	VTP54C3-061B	QMF51A2-R80	QMP2560-200
TD-R411BKE/G	VTP54C3-061B	QMF51A2-R80	QMP3900-200
TD-R411BK J/C	VTP54A3-051BN	——	QMP1200-200
TD-R411BKU	VTP54G3-041B	——	QMP7380-200

SEMICONDUCTOR

Q502, 504, 508, 509, 510, 521, 505, 524	2SC945L(P,K)
Q503	2SA564 (R,S) OR 2SA733A (P,K)
Q517	2SD882 (Q,P)
Q523	2SA952 (L,K)
ALL DIODE UNLESS OTHERWISE SPECIFIED	MA165 OR 1SS254

NOTES

THE RESISTORS MARKED ※ ARE PARTS WITCH ARE INDICATED AS FOLLOWING TABLE 1.

TABLE 1

	A/B/E/G/U	C/J
R506 R562 R578	4.7Ω 1/4W (FUSIBLE)	4.7Ω 1/4W (UF)

Blue line shows the signal at playback.

Red line shows the signal at recording.

+B line.

−B line.

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 9-2

10 Wiring Connections

NOTE : Color of wires subject to change without notice.

Color codes are shown below

1	.....	Brown
2	.....	Red
3	.....	Orange
4	.....	Yellow
5	.....	Green
6	.....	Blue
7	.....	Violet
8	.....	Gray
9	.....	White
0	.....	Black
D	.....	Pink
C	.....	Light Blue

Fig. 10-1

11 Location of P.C. Board Parts and Parts List

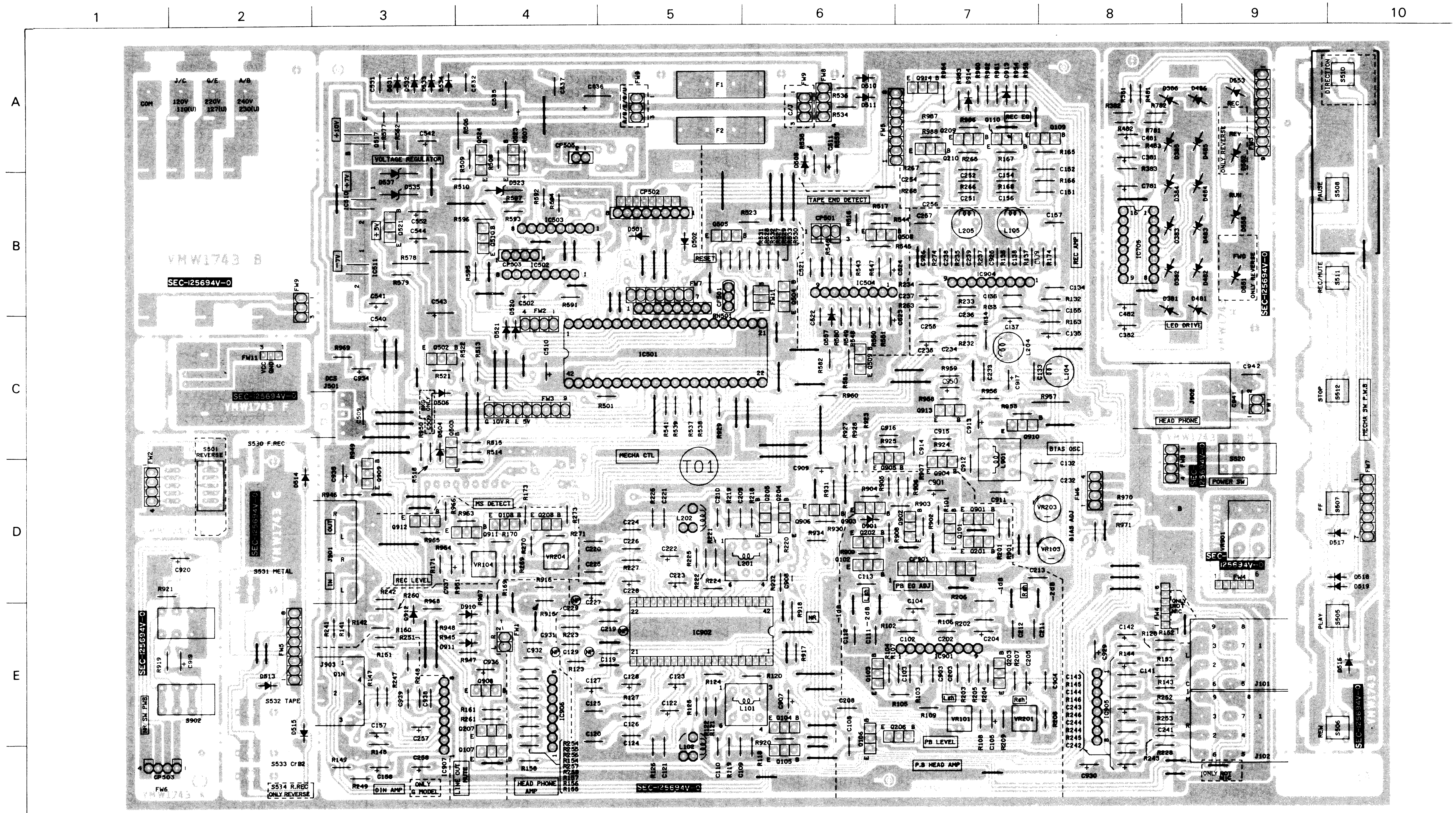
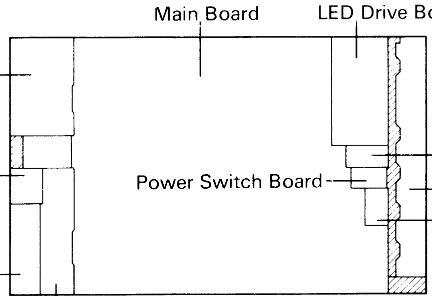
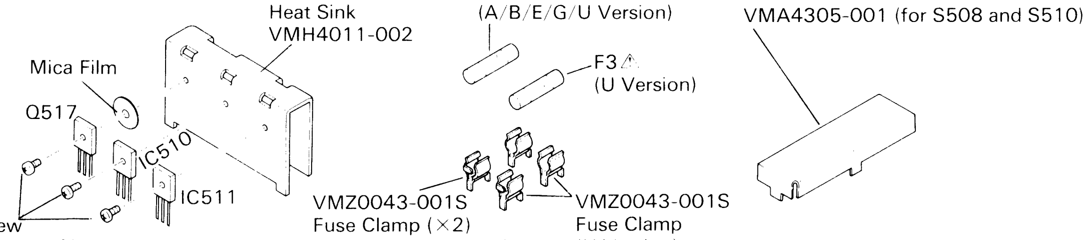


Fig. 11-1





Main Board Parts List

⚠ Parts are safety assurance parts
When replacing those parts, make sure to use the specified one.

⚠	REF. NO	PARTS NO.	PARTS NAME
	CF501	EFO-FC8004A4	CERA LOCK
	CP501	QMV5005-003	CONNECTOR
	CP502	QMV5011-008	CONNECTOR
	CP503	E04365-004S	CONNECTOR
	CP504	QMV5011-004	CONNECTOR
	CP505	QMV5011-002	CONNECTOR
	CP901	VMC0052-008	CONNECTOR
	C102	QCS31HJ-151Z	C.CAPACITOR
	C103	QFV71HJ-103ZM	TF.CAPACITOR
	C104	QETC1AM-107ZN	E.CAPACITOR
	C105	QETC1HM-475ZN	E.CAPACITOR
	C108	QEN61EM-475Z	NP.E.CAPACITOR
	C109	QFN31HJ-152Z	M.CAPACITOR
	C110	QFN31HJ-332Z	M.CAPACITOR
	C111	QCS31HJ-561Z	C.CAPACITOR
	C112	QCS31HJ-331Z	C.CAPACITOR
	C113	QCS31HJ-221Z	C.CAPACITOR
	C119	QEN61EM-475Z	NP.E.CAPACITOR
	C120	QFV71HJ-103ZM	TF.CAPACITOR
	C121	QFV71HJ-183ZM	TF.CAPACITOR
	C122	QETC1HM-684ZN	E.CAPACITOR
	C123	QETC1HM-225ZN	E.CAPACITOR
	C124	QFV71HJ-183ZM	TF.CAPACITOR
	C125	QFV71HJ-103ZM	TF.CAPACITOR
	C126	QFV71HJ-823ZM	TF.CAPACITOR
	C127	QETC1HM-684ZN	E.CAPACITOR
	C128	QETC1HM-225ZN	E.CAPACITOR
	C129	QEN61EM-475Z	NP.E.CAPACITOR
	C132	QCS31HJ-221Z	C.CAPACITOR
	C133	QCS32HJ-151ZV	C CAPACITOR
	C134	QCS31HJ-561Z	C.CAPACITOR
	C135	QETC1HM-225ZN	E.CAPACITOR
	C136	QCS31HJ-151Z	C.CAPACITOR
	C137	QETC1HM-474ZM	E.CAPACITOR
	C138	QFV71HJ-153ZM	TF.CAPACITOR
	C139	QFN31HJ-102Z	M.CAPACITOR
	C141	QCS31HJ-561Z	C.CAPACITOR
	C142	QETC1HM-105ZN	E.CAPACITOR
	C143	QETC1HM-105ZN	E.CAPACITOR
	C144	QCS31HJ-151Z	C.CAPACITOR
	C151	QFV71HJ-223ZM	TF.CAPACITOR
	C152	QFV71HJ-333ZM	TF.CAPACITOR
	C154	QFV71HJ-333ZM	TF.CAPACITOR
	C155	QFN31HJ-562Z	M.CAPACITOR
	C156	QFV71HJ-153ZM	TF.CAPACITOR
	C157	QFV71HJ-123ZM	TF.CAPACITOR
	C158	QETC1HM-105ZN	E.CAPACITOR
	C202	QCS31HJ-151Z	C.CAPACITOR
	C203	QFV71HJ-103ZM	TF.CAPACITOR
	C204	QETC1AM-107ZN	E.CAPACITOR
	C205	QETC1HM-475ZN	E.CAPACITOR
	C208	QEN61EM-475Z	NP.E.CAPACITOR
	C209	QFN31HJ-152Z	M.CAPACITOR
	C210	QFN31HJ-332Z	M.CAPACITOR
	C211	QCS31HJ-561Z	C.CAPACITOR
	C212	QCS31HJ-331Z	C.CAPACITOR
	C213	QCS31HJ-221Z	C.CAPACITOR
	C219	QEN61EM-475Z	NP.E.CAPACITOR
	C220	QFV71HJ-103ZM	TF.CAPACITOR
	C221	QFV71HJ-183ZM	TF.CAPACITOR
	C222	QETC1HM-684ZN	E.CAPACITOR
	C223	QETC1HM-225ZN	E.CAPACITOR
	C224	QFV71HJ-183ZM	TF.CAPACITOR
	C225	QFV71HJ-103ZM	TF.CAPACITOR
	C226	QFV71HJ-823ZM	TF.CAPACITOR
	C227	QETC1HM-684ZN	E.CAPACITOR
	C228	QETC1HM-225ZN	E.CAPACITOR
	C229	QEN61EM-475Z	NP.E.CAPACITOR
	C232	QCS31HJ-221Z	C.CAPACITOR
	C233	QCS32HJ-151ZV	C CAPACITOR
	C234	QCS31HJ-561Z	C.CAPACITOR
	C235	QETC1HM-225ZN	E.CAPACITOR
	C236	QCS31HJ-151Z	C.CAPACITOR
	C237	QETC1HM-474ZM	E.CAPACITOR
	C238	QFV71HJ-153ZM	TF.CAPACITOR
	C239	QFN31HJ-102Z	M.CAPACITOR
	C241	QCS31HJ-561Z	C.CAPACITOR
	C242	QETC1HM-105ZN	E.CAPACITOR
	C243	QETC1HM-105ZN	E.CAPACITOR
	C244	QCS31HJ-151Z	C.CAPACITOR
	C251	QFV71HJ-223ZM	TF.CAPACITOR
	C252	QFV71HJ-333ZM	TF.CAPACITOR
	C254	QFV71HJ-333ZM	TF.CAPACITOR
	C255	QFN31HJ-562Z	M.CAPACITOR
	C256	QFV71HJ-153ZM	TF.CAPACITOR
	C257	QFV71HJ-123ZM	TF.CAPACITOR
	C258	QETC1HM-105ZN	E.CAPACITOR
	C381	QETC1HM-224ZN	E.CAPACITOR
	C382	QETC1EM-226ZN	E CAPACITOR
	C481	QETC1HM-224ZN	E.CAPACITOR
	C482	QETB1EM-226	E CAPACITOR
	C502	QETC1AM-107ZN	E.CAPACITOR
	C509	QCS31HJ-221Z	C.CAPACITOR
	C510	QETC1AM-107ZN	E.CAPACITOR
	C511	QETC1EM-226ZN	E CAPACITOR
	C521	QCF31HP-103Z	C.CAPACITOR
	C522	QCF31HP-103Z	C.CAPACITOR
	C523	QETC1AM-477ZN	E.CAPACITOR
	C524	QETC1HM-475ZN	E.CAPACITOR
	C531	QCF31HP-103Z	C.CAPACITOR
	C532	QCF31HP-103Z	C.CAPACITOR
	C535	QETB1EM-228N	E CAPACITOR
	C536	QET51ER-108N	E.CAPACITOR
	C537	QCF31HP-473Z	C.CAPACITOR
	C540	QETC1AM-107ZN	E.CAPACITOR
	C541	QETC1AM-107ZN	E.CAPACITOR
	C542	QETB1CM-107N	E CAPACITOR
	C543	QETB1AM-109N	E.CAPACITOR
	C544	QETC1AM-107ZN	E.CAPACITOR
	C552	QETC1AM-107ZN	E.CAPACITOR
	C781	QETC1EM-106ZN	E.CAPACITOR
	C901	QETB1AM-227	E CAPACITOR
	C903	QCF31HP-103Z	C.CAPACITOR
	C904	QCF31HP-103Z	C.CAPACITOR
	C907	QETC1AM-477ZN	E.CAPACITOR
	C908	QETC1AM-477ZN	E.CAPACITOR
	C909	QETC1HM-105ZN	E.CAPACITOR
	C910	QETA1AM-227N	E CAPACITOR
	C911	QFP82AJ-153	P.P.CAPACITOR
	C912	QFV71HJ-103ZM	TF.CAPACITOR
	C913	QETC1EM-106ZN	E.CAPACITOR
	C914	QFN31HJ-682Z	M.CAPACITOR
	C915	QFN31HJ-332Z	M.CAPACITOR
	C916	QFN31HJ-332Z	M.CAPACITOR
	C919	QETC1HM-105ZN	E.CAPACITOR
	C920	QETC1EM-106ZN	E.CAPACITOR
	C925	QCF31HP-103Z	C.CAPACITOR
	C926	QCF31HP-103Z	C.CAPACITOR
	C929	QETC1AM-107ZN	E.CAPACITOR
	C930	QETC1AM-107ZN	E.CAPACITOR
	C931	QCF31HP-103Z	C.CAPACITOR
	C932	QCF31HP-103Z	C.CAPACITOR
	C934	QETC1EM-336ZN	E CAPACITOR
	C935	QETC1EM-106ZN	E.CAPACITOR
	C936	QETB1AM-108N	E.CAPACITOR
	C937	QETC1EM-106ZN	E.CAPACITOR
	C938	QCF31HP-103Z	C.CAPACITOR
	C939	QCF31HP-103Z	C.CAPACITOR
	C941	QCF31HP-103Z	C.CAPACITOR
	C942	QCF31HP-103Z	C.CAPACITOR
	C950	QETC1AM-107ZN	E.CAPACITOR
	D381	LN21RCPSL(O)J1	LED
	D382	LN21RCPSL(O)J1	LED
	D383	LN21RCPSL(O)J1	LED
	D384	LN81YCPSL(S)J1	LED
	D385	LN81YCPSL(S)J1	LED
	D386	LN81YCPSL(S)J1	LED
	D481	LN21RCPSL(O)J1	LED
	D482	LN21RCPSL(O)J1	LED
	D483	LN21RCPSL(O)J1	LED
	D484	LN81YCPSL(S)J1	LED
	D485	LN81YCPSL(S)J1	LED
	D486	LN81YCPSL(S)J1	LED
	D501	HSS104TJ	SI DIODE
	D502	HSS104TJ	SI DIODE
	D504	HSS104TJ	SI DIODE
	D506	HSS104TJ	SI DIODE
	D508	HSS104TJ	SI DIODE
	D510	HSS104TJ	SI DIODE
	D511	HSS104TJ	SI DIODE
	D513	HSS104TJ	SI DIODE
	D514	HSS104TJ	SI DIODE
	D515	HSS104TJ	SI DIODE
	D516	HSS104TJ	SI DIODE
	D517	HSS104TJ	SI DIODE
	D518	HSS104TJ	SI DIODE
	D519	HSS104TJ	SI DIODE
	D520	HSS104TJ	SI DIODE
	D521	HSS104TJ	SI DIODE
	D531	11E1-TB2	SI DIODE
	D532	11E1-TB2	SI DIODE
	D533	11E1-TB2	SI DIODE
	D534	11E1-TB2	SI DIODE
	D535	RD5.6E(B3)	ZENER DIODE
	D537	RD11E(B1)	Z DIODE
	D551	LN81YCPSL(S)J1	LED
	D552	LN81YCPSL(S)J1	LED
	D553	LN21RCPSL(O)J1	LED
	D555	LN31GCPSLJ1	LED
	D557	HSS104TJ	SI DIODE
	D901	HSS104TJ	SI DIODE
	D910	HSS104TJ	SI DIODE
	D911	HSS104TJ	SI DIODE
	D912	HSS104TJ	SI DIODE
	D913	HSS104TJ	SI DIODE
	D914	HSS104TJ	SI DIODE
	IC501	MB88505H-659T	IC(CPU)
	IC502	M54641L	IC
	IC503	M54641L	IC
	IC504	AN6555	I.C
⚠	IC510	AN78N07	I.C
⚠	IC511	AN79N07	I.C
	IC705	IR2E27A	I.C
	IC901	AN6557	I C
	IC902	HA12088ANT	DOLBY NR I.C
	IC904	AN6555	I.C
	IC905	BA15218N	I C
	IC906	BA15218N	I C
	IC907	BA15218N	I C
	J101	QMS6313-017	JACK
	J201	QMS6313-017	JACK
	J501	QMS3533-001	JACK
	J901	EMN00TV-402A	PIN JACK
	J902	QMS6302-119G	JACK
	J903	QMC9014-007	DIN SOCKET
	L101	VQZ0025-001S	FILTER
	L102	VQZ0013-001S	FILTER
	L104	VQP0001-183S	INDUCTOR
	L105	VQP0001-562S	INDUCTOR
	L201	VQZ0025-001S	FILTER
	L202	VQZ0013-001S	FILTER
	L204	VQP0001-183S	INDUCTOR
	L205	VQP0001-562S	INDUCTOR
	L901	VQH1008-024	OSC COIL(BIAS)
	Q101	2SC1845(E,U)-T	TRANSISTOR
	Q102	2SC945L(P,K)-T	TRANSISTOR
	Q103	2SK246(GR)E2	FET
	Q104	2SC945L(P,K)-T	TRANSISTOR
	Q105	2SC945L(P,K)-T	TRANSISTOR
	Q106	2SC945L(P,K)-T	TRANSISTOR
	Q107	2SC2001(L,K)-T	TRANSISTOR
	Q108	2SC2001(L,K)-T	TRANSISTOR
	Q109	2SC945L(P,K)-T	TRANSISTOR
	Q110	2SC945L(P,K)-T	TRANSISTOR
	Q201	2SC1845(E,U)-T	TRANSISTOR
	Q202	2SC945L(P,K)-T	TRANSISTOR
	Q203	2SK246(GR)E2	FET
	Q204	2SC945L(P,K)-T	TRANSISTOR
	Q205	2SC945L(P,K)-T	TRANSISTOR
	Q206	2SC945L(P,K)-T	TRANSISTOR
	Q207	2SC2001(L,K)-T	TRANSISTOR
	Q208	2SC2001(L,K)-T	TRANSISTOR
	Q209	2SC945L(P,K)-T	TRANSISTOR
	Q210	2SC945L(P,K)-T	TRANSISTOR
	Q502	2SC945L(P,K)-T	TRANSISTOR
	Q503	2SA564(R,S)TA	TRANSISTOR
	Q504	2SC945L(P,K)-T	TRANSISTOR
	Q505	2SC945L(P,K)-T	TRANSISTOR
	Q508	2SC945L(P,K)-T	TRANSISTOR
	Q509	2SC945L(P,K)-T	TRANSISTOR
	Q510	2SC945L(P,K)-T	TRANSISTOR
⚠	Q517	2SD882(Q,P)	TRANSISTOR
⚠	Q521	2SC945L(P,K)-T	TRANSISTOR
	Q523	2SA952(L,K)-T	TRANSISTOR
	Q524	2SC945L(P,K)-T	TRANSISTOR
	Q901	2SC1845(E,U)-T	TRANSISTOR
	Q902	2SA992(E,U)-T	TRANSISTOR
	Q903	2SC945L(P,K)-T	TRANSISTOR
	Q904	2SC1685(R,S)TA	TRANSISTOR
	Q905	2SC1685(R,S)TA	TRANSISTOR
	Q906	2SA564(R,S)TA	TRANSISTOR
	Q908	2SA564(R,S)TA	TRANSISTOR
	Q909	2SC945L(P,K)-T	TRANSISTOR
	Q910	2SC2001(L,K)-T	TRANSISTOR
	Q911	2SA564(R,S)TA	TRANSISTOR
	Q912	2SC945L(P,K)-T	TRANSISTOR
	Q913	2SA564(R,S)TA	TRANSISTOR
	Q914	2SC945L(P,K)-T	TRANSISTOR
	RN501	QRB075J-103	NETWORK RESIST
	R101	QRD161J-152Y	CARBON RESISTOR
	R102	QRD161J-104Y	CARBON RESISTOR
	R103	QRD161J-394Y	CARBON RESISTOR
	R104	QRD161J-512Y	CARBON RESISTOR
	R105	QRD161J-682Y	CARBON RESISTOR
	R106	QRD161J-101Y	CARBON RESISTOR
	R107	QRD161J-105Y	CARBON RESISTOR
	R108	QRD161J-222Y	CARBON RESISTOR
	R109	QRD161J-222Y	CARBON RESISTOR
	R118	QRD161J-104Y	CARBON RESISTOR
	R119	QRD161J-104Y	CARBON RESISTOR
	R120	QRD161J-222Y	CARBON RESISTOR
	R121	QRD161J-472Y	CARBON RESISTOR
	R122	QRD161J-822Y	CARBON RESISTOR
	R123	QRD161J-102Y	CARBON RESISTOR
	R124	QRD161J-332Y	CARBON RESISTOR
	R125	QRD161J-102Y	CARBON RESISTOR
	R126	QRD161J-683Y	CARBON RESISTOR
	R127	QRD161J-101Y	CARBON RESISTOR
	R128	QRD161J-103Y	CARBON RESISTOR
	R132	QRD161J-103Y	CARBON RESISTOR

⚠	REF. NO	PARTS NO.	PARTS NAME
	R133	QRD161J-223Y	CARBON RESISTOR
	R134	QRD161J-822Y	CARBON RESISTOR
	R135	QRD161J-152Y	CARBON RESISTOR
	R137	QRD161J-151Y	CARBON RESISTOR
	R141	QRD161J-273Y	CARBON RESISTOR
	R142	QRD161J-332Y	CARBON RESISTOR
	R143	QRD161J-101Y	CARBON RESISTOR
	R144	QRD161J-183Y	CARBON RESISTOR
	R145	QRD161J-101Y	CARBON RESISTOR
	R146	QRD161J-103Y	CARBON RESISTOR
	R147	QRD161J-103Y	CARBON RESISTOR
	R148	QRD161J-105Y	CARBON RESISTOR
	R149	QRD161J-393Y	CARBON RESISTOR
	R151	QRD161J-332Y	CARBON RESISTOR
	R152	QRD161J-104Y	CARBON RESISTOR
	R153	QRD161J-103Y	CARBON RESISTOR
	R154	QRD161J-151Y	CARBON RESISTOR
	R155	QRD161J-184Y	CARBON RESISTOR
	R156	QRD161J-103Y	CARBON RESISTOR
	R157	QRD161J-103Y	CARBON RESISTOR
	R158	QRD161J-473Y	CARBON RESISTOR
	R160	QRD161J-103Y	CARBON RESISTOR
	R161	QRD161J-332Y	CARBON RESISTOR
	R163	QRD161J-103Y	CARBON RESISTOR
	R165	QRD161J-272Y	CARBON RESISTOR
	R166	QRD161J-392Y	CARBON RESISTOR
	R167	QRD161J-152Y	CARBON RESISTOR
	R168	QRD161J-182Y	CARBON RESISTOR
	R169	QRD161J-472Y	CARBON RESISTOR
	R170	QRD161J-472Y	CARBON RESISTOR
	R171	QRD161J-472Y	CARBON RESISTOR
	R173	QRD161J-332Y	CARBON RESISTOR
	R174	QRD161J-101Y	CARBON RESISTOR
	R201	QRD161J-152Y	CARBON RESISTOR
	R202	QRD161J-104Y	CARBON RESISTOR
	R203	QRD161J-394Y	CARBON RESISTOR
	R204	QRD161J-512Y	CARBON RESISTOR
	R205	QRD161J-682Y	CARBON RESISTOR
	R206	QRD161J-101Y	CARBON RESISTOR
	R207	QRD161J-105Y	CARBON RESISTOR
	R208	QRD161J-222Y	CARBON RESISTOR
	R209	QRD161J-222Y	CARBON RESISTOR
	R218	QRD161J-104Y	CARBON RESISTOR
	R219	QRD161J-104Y	CARBON RESISTOR
	R220	QRD161J-222Y	CARBON RESISTOR
	R221	QRD161J-472Y	CARBON RESISTOR
	R222	QRD161J-822Y	CARBON RESISTOR
	R223	QRD161J-102Y	CARBON RESISTOR
	R224	QRD161J-332Y	CARBON RESISTOR
	R225	QRD161J-102Y	CARBON RESISTOR
	R226	QRD161J-683Y	CARBON RESISTOR
	R227	QRD161J-101Y	CARBON RESISTOR
	R228	QRD161J-103Y	CARBON RESISTOR
	R232	QRD161J-103Y	CARBON RESISTOR
	R233	QRD161J-223Y	CARBON RESISTOR
	R234	QRD161J-822Y	CARBON RESISTOR
	R235	QRD161J-152Y	CARBON RESISTOR
	R237	QRD161J-151Y	CARBON RESISTOR
	R241	QRD161J-273Y	CARBON RESISTOR
	R242	QRD161J-332Y	CARBON RESISTOR
	R243	QRD161J-101Y	CARBON RESISTOR
	R244	QRD161J-183Y	CARBON RESISTOR
	R245	QRD161J-101Y	CARBON RESISTOR
	R246	QRD161J-103Y	CARBON RESISTOR
	R247	QRD161J-103Y	CARBON RESISTOR
	R248	QRD161J-105Y	CARBON RESISTOR
	R249	QRD161J-393Y	CARBON RESISTOR
	R251	QRD161J-332Y	CARBON RESISTOR
	R252	QRD161J-104Y	CARBON RESISTOR
	R253	QRD161J-103Y	CARBON RESISTOR

⚠	REF. NO	PARTS NO.	PARTS NAME
	R254	QRD161J-151Y	CARBON RESISTOR
	R255	QRD161J-184Y	CARBON RESISTOR
	R256	QRD161J-103Y	CARBON RESISTOR
	R257	QRD161J-103Y	CARBON RESISTOR
	R258	QRD161J-473Y	CARBON RESISTOR
	R260	QRD161J-103Y	CARBON RESISTOR
	R261	QRD161J-332Y	CARBON RESISTOR
	R263	QRD161J-103Y	CARBON RESISTOR
	R265	QRD161J-272Y	CARBON RESISTOR
	R266	QRD161J-392Y	CARBON RESISTOR
	R267	QRD161J-152Y	CARBON RESISTOR
	R268	QRD161J-182Y	CARBON RESISTOR
	R269	QRD161J-472Y	CARBON RESISTOR
	R270	QRD161J-472Y	CARBON RESISTOR
	R271	QRD161J-472Y	CARBON RESISTOR
	R273	QRD161J-332Y	CARBON RESISTOR
	R274	QRD161J-101Y	CARBON RESISTOR
	R381	QRD161J-183Y	CARBON RESISTOR
	R382	QRD161J-333Y	CARBON RESISTOR
	R383	QRD161J-103Y	CARBON RESISTOR
	R481	QRD161J-183Y	CARBON RESISTOR
	R482	QRD161J-333Y	CARBON RESISTOR
	R483	QRD161J-103Y	CARBON RESISTOR
	R501	QRD161J-103Y	CARBON RESISTOR
⚠	R506	QRD149J-4R7S	CARBON RESISTOR
	R507	QRD161J-102Y	CARBON RESISTOR
	R508	QRD161J-152Y	CARBON RESISTOR
	R509	QRD161J-103Y	CARBON RESISTOR
	R510	QRD161J-103Y	CARBON RESISTOR
	R513	QRD161J-103Y	CARBON RESISTOR
	R514	QRD161J-223Y	CARBON RESISTOR
	R515	QRD161J-103Y	CARBON RESISTOR
	R516	QRD161J-471Y	CARBON RESISTOR
	R517	QRD161J-104Y	CARBON RESISTOR
	R518	QRD161J-221Y	CARBON RESISTOR
	R521	QRD161J-223Y	CARBON RESISTOR
	R522	QRD161J-473Y	CARBON RESISTOR
	R523	QRD161J-223Y	CARBON RESISTOR
	R527	QRD161J-103Y	CARBON RESISTOR
	R528	QRD161J-472Y	CARBON RESISTOR
	R529	QRD161J-472Y	CARBON RESISTOR
	R530	QRD161J-222Y	CARBON RESISTOR
	R531	QRD161J-103Y	CARBON RESISTOR
	R532	QRD161J-102Y	CARBON RESISTOR
	R533	QRD161J-104Y	CARBON RESISTOR
	R534	QRD161J-102Y	CARBON RESISTOR
	R535	QRD161J-102Y	CARBON RESISTOR
	R536	QRD161J-102Y	CARBON RESISTOR
⚠	R537	QRD161J-391Y	CARBON RESISTOR
⚠	R538	QRD161J-391Y	CARBON RESISTOR
⚠	R539	QRD161J-391Y	CARBON RESISTOR
⚠	R541	QRD161J-331Y	CARBON RESISTOE
	R543	QRD161J-152Y	CARBON RESISTOR
	R544	QRD161J-151Y	CARBON RESISTOR
	R545	QRD161J-682Y	CARBON RESISTOR
	R546	QRD161J-155Y	CARBON RESISTOR
	R547	QRD161J-103Y	CARBON RESISTOR
	R548	QRD161J-104Y	CARBON RESISTOR
	R549	QRD161J-102Y	CARBON RESISTOR
	R550	QRD161J-104Y	CARBON RESISTOR
	R551	QRD161J-104Y	CARBON RESISTOR
	R559	QRD161J-221Y	CARBON RESISTOR
⚠	R562	QRD149J-4R7S	CARBON RESISTOR
⚠	R577	QRD149J-221S	CARBON RESISTOR
⚠	R578	QRD149J-4R7S	CARBON RESISTOR
	R579	QRD161J-471Y	CARBON RESISTOR
	R580	QRD161J-102Y	CARBON RESISTOR
	R581	QRD161J-152Y	CARBON RESISTOR
	R582	QRD161J-332Y	CARBON RESISTOR
	R591	QRD161J-102Y	CARBON RESISTOR

⚠	REF. NO	PARTS NO.	PARTS NAME
	R592	QRD161J-102Y	CARBON RESISTOR
	R593	QRD161J-222Y	CARBON RESISTOR
	R594	QRD161J-272Y	CARBON RESISTOR
	R595	QRD161J-103Y	CARBON RESISTOR
	R596	QRD161J-103Y	CARBON RESISTOR
	R597	QRD161J-561Y	CARBON RESISTOR
⚠	R781	QRD161J-821Y	CARBON RESISTOR
	R782	QRD161J-821Y	CARBON RESISTOR
	R901	QRD161J-471Y	CARBON RESISTOR
	R902	QRD161J-332Y	CARBON RESISTOR
	R903	QRD161J-472Y	CARBON RESISTOR
	R904	QRD161J-103Y	CARBON RESISTOR
	R905	QRD161J-223Y	CARBON RESISTOR
	R906	QRD161J-221Y	CARBON RESISTOR
	R907	QRD161J-222Y	CARBON RESISTOR
	R908	QRD161J-332Y	CARBON RESISTOR
	R909	QRD161J-222Y	CARBON RESISTOR
	R911	QWY124-5.0Y	BUS WIRE
	R915	QRD161J-100Y	CARBON RESISTOR
	R916	QRD161J-100Y	CARBON RESISTOR
	R917	QRD161J-103Y	CARBON RESISTOR
	R918	QRD161J-103Y	CARBON RESISTOR
	R919	QRD161J-223Y	CARBON RESISTOR
	R920	QRD161J-472Y	CARBON RESISTOR
	R921	QRD161J-472Y	CARBON RESISTOR
⚠	R923	QRD149J-4R7S	CARBON RESISTOR
	R924	QRD161J-393Y	CARBON RESISTOR
	R925	QRD161J-393Y	CARBON RESISTOR
	R927	QRD161J-103Y	CARBON RESISTOR
	R928	QRD161J-332Y	CARBON RESISTOR
	R929	QRD161J-471Y	CARBON RESISTOR
	R930	QRD161J-471Y	CARBON RESISTOR
	R931	QRD161J-332Y	CARBON RESISTOR
	R932	QRD161J-152Y	CARBON RESISTOR
	R934	QRD161J-152Y	CARBON RESISTOR
	R946	QRD161J-101Y	CARBON RESISTOR
	R947	QRD161J-103	CARBON RESISTOR
	R948	QRD161J-472Y	CARBON RESISTOR
	R949	QRD161J-103Y	CARBON RESISTOR
	R950	QRD161J-223Y	CARBON RESISTOR
	R951	QRD161J-101Y	CARBON RESISTOR
	R953	QRD161J-103Y	CARBON RESISTOR
	R954	QRD161J-152Y	CARBON RESISTOR
	R955	QRD161J-122Y	CARBON RESISTOR
	R956	QRD161J-102Y	CARBON RESISTOR
⚠	R957	QRD149J-100S	CARBON RESISTOR
⚠	R958	QRD161J-102Y	CARBON RESISTOR
⚠	R959	QRD161J-562Y	CARBON RESISTOR
	R960	QRD161J-153Y	CARBON RESISTOR
	R963	QRD161J-472Y	CARBON RESISTOR
	R964	QRD161J-103Y	CARBON RESISTOR
	R965	QRD161J-103Y	CARBON RESISTOR
	R966	QRD161J-223Y	CARBON RESISTOR
	R967	QRD161J-391Y	CARBON RESISTOR
	R968	QRD161J-103Y	CARBON RESISTOR
	R969	QRD161J-102Y	CARBON RESISTOR
	R970	QRD161J-471Y	CARBON RESISTOR
	R971	QRD161J-471Y	CARBON RESISTOR
	R980	QRD161J-152Y	CARBON RESISTOR
	R981	QRD161J-123Y	CARBON RESISTOR
	R982	QRD161J-123Y	CARBON RESISTOR
	R983	QRD161J-152Y	CARBON RESISTOR
	R984	QRD161J-104Y	CARBON RESISTOR
	R986	QRD161J-273Y	CARBON RESISTOR
	R987	QRD161J-123Y	CARBON RESISTOR
	R988	QRD161J-273Y	CARBON RESISTOR
	S501	QSS7A23-V05	SLIDE SWITCH
	S505	QSP1A11-V01	TACT SWITCH
	S506	QSP1A11-V01	TACT SWITCH
	S507	QSP1A11-V01	TACT SWITCH

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF. NO	PARTS NO.	PARTS NAME
	S508	QSP1A11-V01	TACT SWITCH
	S510	QSP1A11-V01	TACT SWITCH
	S511	QSP1A11-V01	TACT SWITCH
	S512	QSP1A11-V01	TACT SWITCH
⚠	S520	QSP0219-061	PUSH SWITCH
	S902	QST7261-V01	PUSH SW
	VR101	QVPA601-502	V.RESISTOR
	VR103	QVP4A0B-104	V.RESISTOR
	VR104	QVPA601-203	POTENTIOMETER
	VR201	QVPA601-502	V.RESISTOR
	VR203	QVP4A0B-104	V.RESISTOR
	VR204	QVPA601-203	POTENTIOMETER
	VR901	QVD7A7A-015V	V.RESISTER
⚠	S1	QSS2325-208	SLIDE SWITCH
	C157	QETC1HM-224ZN	E.CAPACITOR (DIN AMP)
	C257	QETC1HM-224ZN	E.CAPACITOR (DIN AMP)

12 Exploded View of Mechanism Assembly

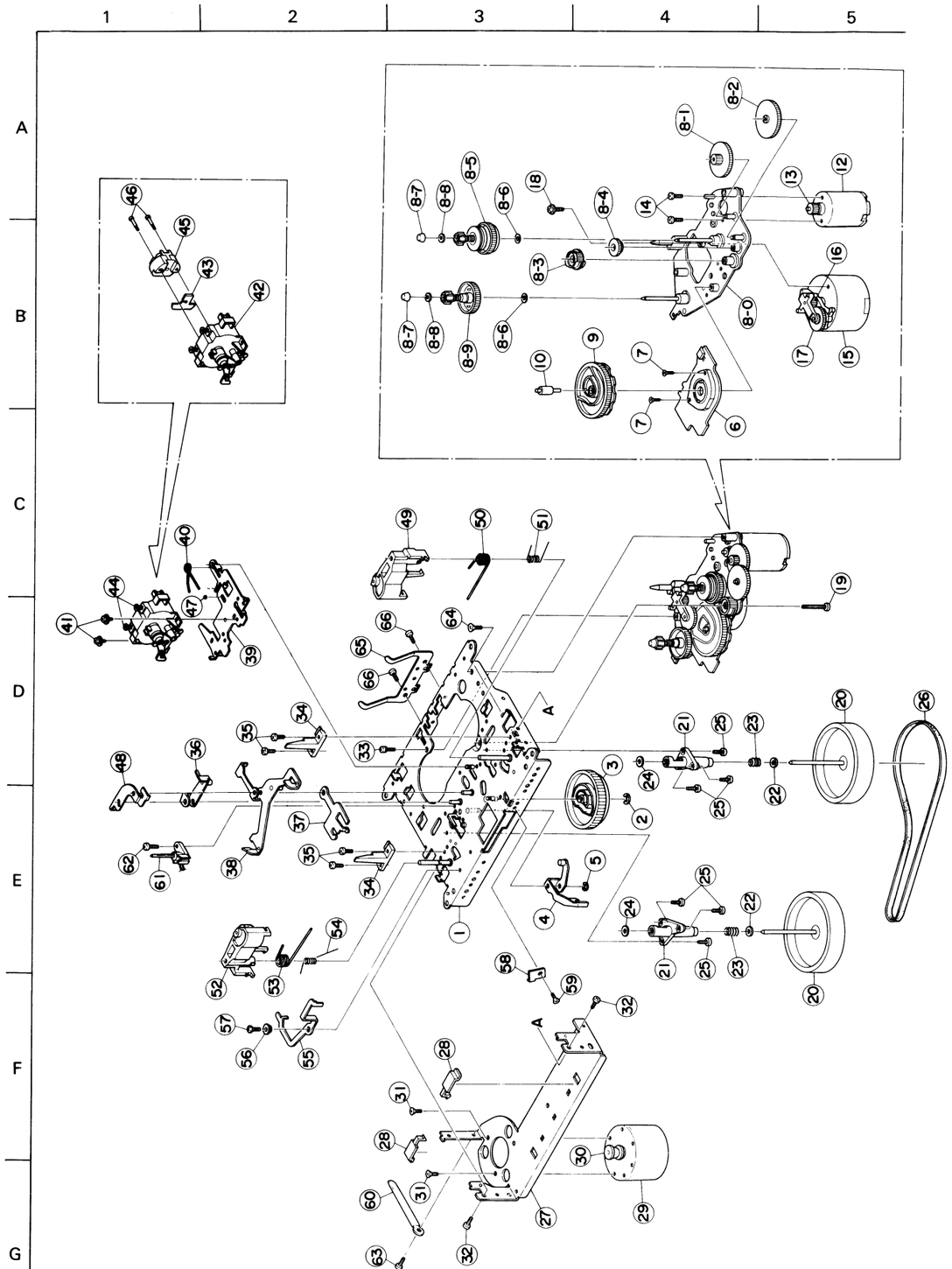


Fig. 12-1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Mechanism Assembly Parts List

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	VKL2387-00A	CHASSIS BASE		1
	2	REE2000X	WASHER		1
	3	VKS2186-002	P.ROLLER CAM		1
	4	VKL5333-00E	HEAD LEVER ASY		1
	5	REE1500	E.RING		1
	6	VKZ3152-00C	CAM SWITCH ASY.	CAM SWITCH	1
	7	SSST2006Z	TAP.SCREW		2
	8-0	VKL2375-001	DISK BASE		1
	8-1	VKR4527-001	HELICAL GEAR		1
	8-2	VKR3001-002	GEAR(2)		1
	8-3	VKR3145-002	CAM GEAR		1
	8-4	VKR4516-001	GEAR		1
	8-5	VKR4517-00A	REEL DISK ASS'Y		1
	8-6	VKZ4003-010	FELT		1
		VKZ4003-010	FELT	BACK TENSION	1
	8-7	VKS4131-001	REEL STOPPER		1
		VKS4131-001	REEL STOPPER		1
	8-8	VKR4170-001	RING		1
		VKR4170-001	RING		1
	8-9	VKR4518-00A	REEL DISK ASS'Y		1
	9	VKS2188-002	HEAD BASE CAM		1
	10	VKH3004-068	FLANGE SHAFT(A)		1
⚠	12	MXN-13AB08A	D.C.MOTOR	FOR CAM	1
	13	VKR4528-001	MOTOR GEAR	CAM MOTOR	1
	14	SPSP3005Z	SCREW	CAM MOTOR	2
⚠	15	MMN-6F4RA88	D.C.MOTOR	FOR REEL	1
	16	VKR3000-003	GEAR(1)	REEL MOTOR	1
	17	VKS4503-00D	F.R ASS'Y		1
	18	SWSP2608Z	SCREW	REEL MOTOR	1
	19	SDSR2610Z	SCREW	D.BASE UNIT	1
	20	VKF3149-00B	FLYWHEEL ASS'Y		2
	21	VKF4122-00E	CAPSTAN METAL		2
	22	VKZ4035-010	WASHER	TAKE-UP	2
	23	VKW3001-241	SPRING	THRUST	2
	24	VKZ4035-009	WASHER	OIL CUT	2
	25	SDST2605Z	SCREW	FLYWHEEL ASS'Y	6
	26	VKB3001-035	BELT		1
	27	VKL3682-001	F.M.BRACKET		1
	28	VKS4437-001	THRUST PLATE		2
⚠	29	SHE2L52	D.C.MOTOR	M4 CAPSTAN	1
	30	VKR4384-001	MOTOR PULLEY		1
	31	SSSP2604Z	SCREW	CAPSTAN MOTOR	2
	32	SDST2606Z	SCREW	F.M.BRACKET	2
	33	LPSP2614Z	SCREW	REEL MOTOR	1
	34	VKS4901-002	CASSETTE GUIDE		2
	35	SDST2606Z	SCREW	CASSETTE GUIDE	4
	36	VKL5316-00E	H.BASE ARM ASSY		1
	37	VKL5318-003	HEAD ARM		1
	38	VKL3413-00D	P.R.LEVER ASS'Y		1
	39	VKL3683-003	HEAD BASE		1
	40	VKW4467-004	TORSION SPRING		1
	41	KPSP2004Z	SCREW		2
	42	VKS3349-00C	H.MOUNTBASE ASY	ASS'Y PARTS	1
	43	VKZ4271-002	WIRE STOPPER		1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	44	VKZ4514-001	SPECIAL SCREW		2
	45	VGH0425-536	R/P-& E HEAD	H2	1
	46	VKZ4291-005	HEAD SCREW		2
	47	T41615-004	STEEL BALL	HEAD BASE	1
	48	VKY4425-002	SPRING PLATE	HEAD BASE	1
	49	VKP4169-00D	P.R.ARM ASS'Y	RIGHT	1
	50	VKW3006-130	TORSION SPRING	PINCH ROLLER	1
	51	VKW3006-057	TORSION SPRING	RETURN	1
	52	VKP4171-00D	P.R.ARM ASS'Y	LEFT	1
	53	VKW3006-131	TORSION SPRING	PINCH ROLLER	1
	54	VKW3006-143	TORSION SPRING	RETURN	1
	55	VKL5322-003	DOOR SAFETY		1
	56	VKH4418-001	FLANGE COLLAR		1
	57	SDST2606Z	SCREW		1
	58	VKL5398-001	BRACKET		1
	59	SSST2605Z	SCREW		1
	60	VKZ4001-010	WIRE CLAMP		1
	61	SPI-302	REFLECTOR		1
	62	SDST2606Z	SCREW		1
	63	SDST2606Z	SCREW		1
	64	SSSF3010Z	SCREW	MECHA	1
	65	VKY4279-001	PACK SPRING		1
	66	SDST2604Z	SCREW	PACK SPRING	2
	ICM1	DN6838A	HALL I.C	ICM1	1
	ICM3	DN6838A	HALL I.C		1

13 Exploded of Enclosure Assembly

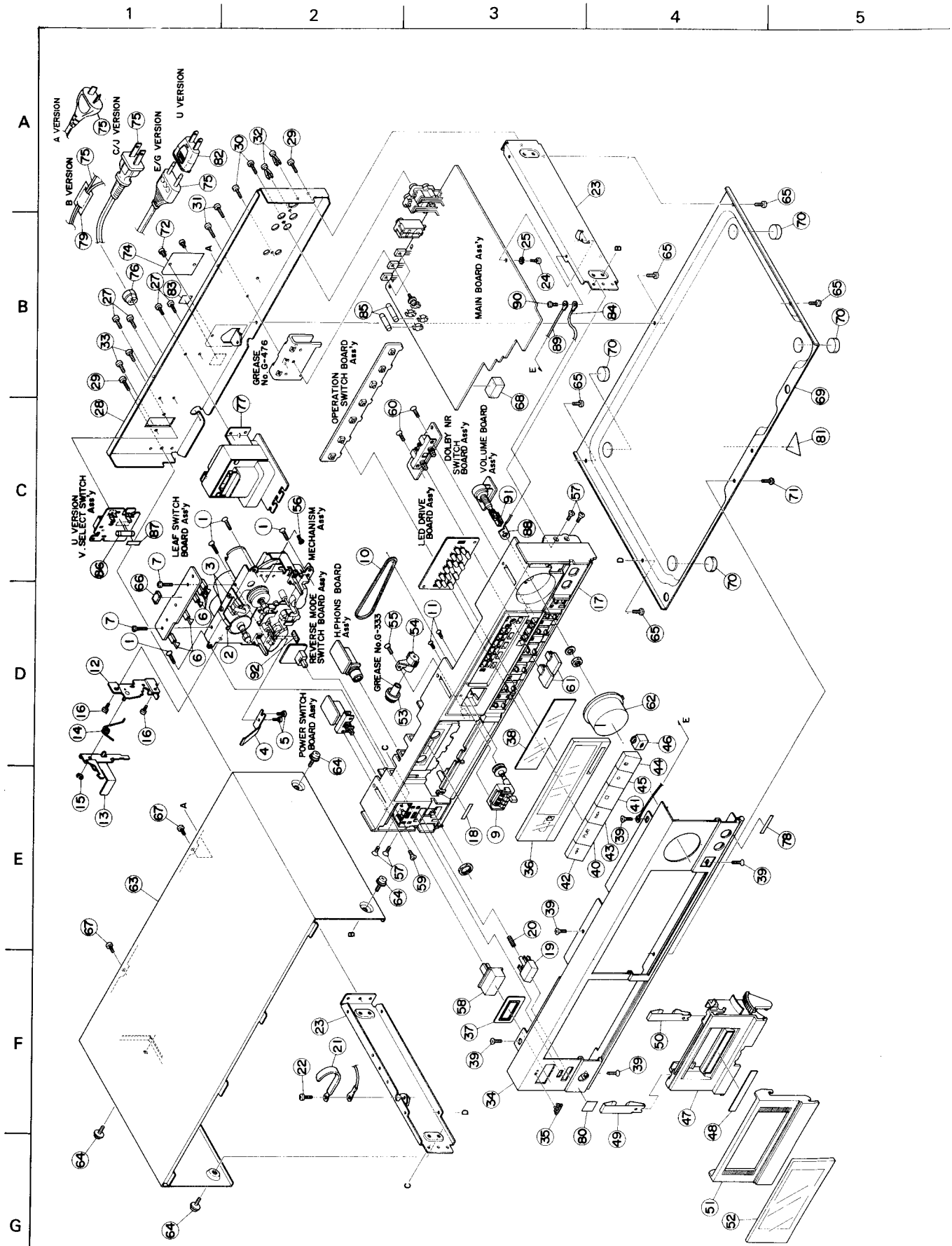


Fig. 13-1

Enclosure Assembly Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	SSSF3010Z	SCREW	MECHA+F.PANEL	4
	2	VKY4279-001	PACK SPRING		1
	3	SDST2604Z	SCREW		2
	4	VKY4497-001	HOLDER SPRING	MECHA	1
	5	SDST2603Z	SCREW	H.SPRING	2
	6	VSH1140-002	LEAF SWITCH	MECHA	5
	7	SDST2608Z	SCREW	LEAF SW PWB	2
	9	VKC5189-001T	TAPE COUNTER		1
	10	VKB3000-053	COUNTER BELT		1
	11	SSSF2606Z	SCREW	FOR TAPE COUNTER	2
	12	VKL6066-00A	EJECT BKT ASS'Y		1
	13	VKM3124-001	EJECT LEVER		1
	14	VKW4643-001	TORSION SPRING		1
	15	REE2500	E.RING		1
	16	SDST2605Z	SCREW		2
	17	VJC1688-001	FRONT PANEL		1
	18	VJD4024-001	REFLECTION PLAT		1
	19	VXP4349-00A	PUSH BUTTON		1
	20	VKW3001-063	COMP.SPRING		1
	21	VKZ4001-011	WIRE HOLDER		1
	22	SDST3006Z	SCREW		1
	23	VKL3817-003	SIDE CHASSIS		2
	24	SDST3006Z	SCREW	P.W.B	1
	25	WBS3000N	WASHER		1
	27	SDST3006M	SCREW	P.TRANS	4
	28	VJC2266-006	REAR PANEL	TD-R411A/B/C/E/J(BK)	1
		VJC2266-007	REAR PANEL	TD-R411G(BK)	1
		VJC2266-008	REAR PANEL	TD-R411U(BK)	1
	29	SDST3006M	SCREW	R.PANEL+C.CHASSIS	2
	30	SDSF3008M	SCREW	P.JACK+DCS	2
	31	SDSF3008M	SCREW	HEAT SINK	2
	32	E48729-002	PLASTIC RIVET	TD-R411G DIN JACK	2
	33	SDSP3008M	SCREW	TD-R411U V.SELECT	2
	34	VJC1689-001	FRONT PLATE	EXCEPT TD-R411C/J	1
		VJC1689-002	FRONT PLATE	TD-R411C	1
		VJC1689-002	FRONT PLATE	TD-R411J	1
	35	E72968-001	JVC MARK		1
	36	VJK3430-004	FINDER		1
	37	E73878-002	P.BUTTON ESCUTC		1
	38	VJD5119-001	LED PLATE		1
	39	SSSF3010Z	SCREW	F.PANEL+F.PLATE	5
	40	VXP3221-007	MECHA BUTTON	PLAY	1
	41	VXP3221-008	MECHA BUTTON	STOP	1
	42	VXP3221-009	MECHA BUTTON	REW	1
	43	VXP3221-010	MECHA BUTTON	FF	1
	44	VXP3221-011	MECHA BUTTON	PAUSE	1
	45	VXP3221-012	MECHA BUTTON	REC/REC MUTE	1
	46	VXP4686-003	PUSH BUTTON	DIRECTION	1
	47	VJT2177-001	CASSETTE HOLDER		1
	48	VJD5143-001	HOLDER PLATE		1
	49	VKY4382-007	CASSETTE SPRING		1
	50	VKY4382-008	CASSETTE SPRING		1
	51	VJT3242-001	CASSETTE LID		1
	52	VJT4149-001	CASSETTE FINDER		1
	53	VYH4769-002	GEAR		1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	54	VYH5033-002	DAMPER HOLDER		1
	55	SBSF3010Z	TAPPING SCREW		1
	56	SSSF3010Z	SCREW		1
	57	SSST3006Z	SCREW		4
	58	E73877-001	PUSH BUTTON	POWER	1
	59	SSST3008Z	SCREW	POWER	1
	60	SSSF3010Z	SCREW		2
	61	E71268-002	PUSH KNOB	DOLBY	2
	62	E304768-001	VOL. KNOB		1
	63	VJC2101-008	TOP COVER		1
	64	VKZ3001-004	SPECIAL SCREW		4
	65	SDST3006Z	SCREW		5
	66	VYSR103-022	SPACER		1
	67	SDST3006M	SCREW		2
	68	VYSH115-004	SPACER		1
	69	VJC1590-002	BOTTOM COVER		1
	70	VJF4003-002	FOOT		4
	71	SDSF3010Z	TAP.SCREW		1
	72	SDST3006M	SCREW		2
	74	VYN2216-002KA	NAME PLATE	TD-R411A(BK)	1
		VYN2216-002KA	NAME PLATE	TD-R411B(BK)	1
		VYN2216-004KA	NAME PLATE	TD-R411C(BK)	1
		VYN2216-005KA	NAME PLATE	TD-R411E(BK)	1
		VYN2216-006KA	NAME PLATE	TD-R411J(BK)	1
		VYN2216-007KA	NAME PLATE	TD-R411U(BK)	1
		VYN2216-008KA	NAME PLATE	TD-R411G(BK)	1
⚠	75	QMP1200-200	POWER CORD	TD-R411C/J	1
⚠		QMP2560-200	POWER CORD	TD-R411A	1
⚠		QMP3900-200	POWER CORD	TD-R411E/G/U	1
⚠		QMP9017-008BS	POWER CORD	TD-R411B	1
⚠	76	QHS3876-162	S.R.BUSHING	TD-R411A/C/E/G/J/U	1
⚠		QHS3876-162BS	S.R.BUSHING	TD-R411B	1
⚠	77	VTP54A3-051BN	POWER TRANS	TD-R411C/J	1
⚠		VTP54C3-061B	POWER TRANS	TD-R411A/E/G	1
⚠		VTP54C3-061BBS	POWER TRANS	TD-R411B	1
⚠		VTP54G3-041B	POWER TRANS	TD-R411U	1
	78	TJL000420-01	CAUTION LABEL	MADE IN JAPAN 411B	1
⚠	79	QZL1002-003	WARNING LABEL	2-PIN P. CORD 411B	1
	80	VNC5004-001	MARK STICKER	DIN 45500 411B/E/G	1
	81	VND4113-001	G.CAUTION CARD	411B/J	1
	82	V04062-001	CONTI.PLUG	TD-R411U	1
	83	VND4037-002	F MARK	TD-R411G	1
	84	VWE350-10A2NT	WIRE WITH LUG		1
⚠	85	QMF51A2-R80	FUSE	F2 EXCEPT R411B	2
⚠		QMF51E2-R80BS	FUSE	F2 411B ONLY	2
⚠	86	QMF51A2-R125	FUSE	F3 411U	1
	87	VND4003-046	FUSE LABEL	411U	1
	88	TAZ336499-02	VOLUME LUG		1
	89	VWE350-08NTNT	LUG WIRE		1
	90	SDST3006Z	SCREW		1
	91	VYSA1R2-008	SPACER		1
	92	VYSR103-028	SPACER		1

14 Packing

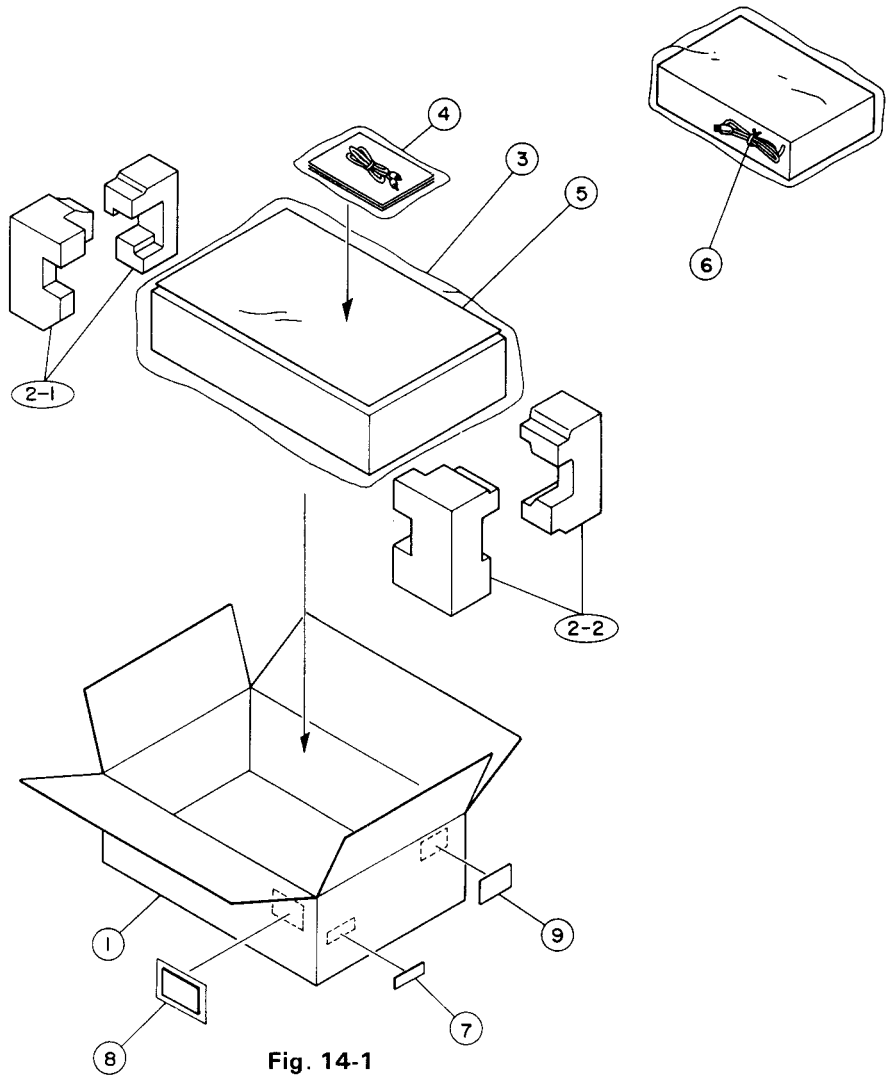


Fig. 14-1

Packing Parts List

⚠ Parts are safety assurance parts
When replacing those parts, make sure to use the specified one.

⚠	Ref.No.	Parts No.	Parts Name	Remarks	Q'ty
	1	VPC2216-002	Carton		1
	2-1	VPH3125-002	Cushion	Left Side	1
	2-2	VPH3126-002	Cushion	Right Side	1
	3	VPE3005-025	Poly Bag	for Set	1
	4	VPE3005-007	Envelope	for Instruction Book	1
	5	VPK4002-006	Sheet	for Set	1
	6	Q04141H	Wire Clamp		1
	7	VND4909-001	Voltage Label	TD-R411BKU	1
	8	E66416-003	Envelope	TD-R411BKJ/U for Warranty Card	1
	9	VND3044-004	Serial Label	TD-R411BKB	1
		VND3044-001	Serial Label	TD-R411BKA/U	1
		VND3044-001	Serial Label	TD-R411BKC	2
		VND3044-003	Serial Label	TD-R411BKE	1
		VND3044-002	Serial Label	TD-R411BKJ	2
		VND3044-005	Serial Label	TD-R411BKG	1

15 Accessories

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Parts No.	Parts Name	Remarks	Q'ty
	VPM0039-00B	Pin Cord		1
	EWP805-001	Remote Wire		1
	VNN2216-661	Instruction Book		1
	BT20025J	Warranty Card	TD-R411BKC	1
	BT20029C	Warranty Card	TD-R411BKA	1
	BT20047C	Warranty Card	TD-R411BKJ/U	1
	BT20060	Guarranty Card	TD-R411BKB	1
	BT20064A	Warranty Card	TD-R411BKG	1
	BT20066	Warranty Card	TD-R411BKB/G	1
	BT20098	Warranty Card	TD-R411BKA	1
	BT20071A	Service Network	TD-R411BKC	1
	BT20044E	Safety Instruction	TD-R411BKJ	1
	VNC5311-203	Cautinn Card	TD-R411BKU	1
	VNC5311-204	Caution Card	TD-R411BKU	1
	VNC2200-019	Copylight Law Worning	TD-R411BKA/B/C/E/U	1
	BT20046C	Special Reply Card	TD-R411BKJ/U	1

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Printed
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